LPDES PERMIT NO. LA0000329, AI No. 289

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. **Company/Facility Name:** Honeywell International, Inc.
Honeywell Baton Rouge Plant
P.O. Box 2830
Baton Rouge, Louisiana 70821

II. **Issuing Office:** Louisiana Department of Environmental Quality
(LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. **Prepared By:** Christy Clark
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Date Prepared: September 4, 2009

IV. **Permit Action/Status:**

A. Reason For Permit Action:

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46*.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301, 4901, and 4903.

B. NPDES permit - NPDES permit effective date: N/A
NPDES permit expiration date: N/A
EPA has not retained enforcement authority.

C. LPDES permit - LPDES permit effective date: March 1, 2004
LPDES permit modification effective date:
July 1, 2008
LPDES permit expiration date: February 28, 2009

D. Application received on January 15, 2009. Additional written information received by mail on July 22, 2009, September 22, 2009, and November 30, 2009. Additional information received via e-mail on

September 15, 2009, December 16, 2009, and December 22, 2009. Additional information received by phone on January 12, 2010.

V. Facility Information:

A. Location - the corner of Lupine and Ontario Streets in Baton Rouge, East Baton Rouge Parish
(Latitude 30°28'44", Longitude 91°11'01")

B. Applicant Activity -

According to the application, Honeywell International, Inc., Baton Rouge Plant, is a chemical manufacturing facility that produces, reclaims, and repackages fluorocarbon products, zinc chloride, and aqueous Calcium Chloride.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Organic Chemicals, Plastics, and Synthetic Fibers Process Flow - 0.4947 MGD	40 CFR 414 Subparts G and J
Inorganic Chemicals- Zinc Chloride Process Flow - Zero discharge	40 CFR 415 Subpart BO

All wastewater containing zinc chloride is contained during the Genetron 1113 process (G-1113) and is recycled to the process for raw materials recovery and is not discharged; therefore, the guidelines are not applicable.

Inorganic Chemicals- Calcium Chloride	40 CFR 415 Subpart D

Calcium Chloride manufacturing by the brine extraction process is addressed at Subpart D of 40 CFR Part 415. The facility does not utilize this process to produce Calcium Chloride; therefore, the guidelines are not applicable.

Other sources of technology based limits:
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
Best Professional Judgment
Current LPDES Permit (effective March 1, 2004)

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2869 and 2819

VI. Receiving Waters: Mississippi River via local drainage and Capitol Lake via a parish municipal sewer system

A. Mississippi River (Outfalls 001, 003, and 005)
1. TSS (15%), mg/L: 53
2. Average Hardness, mg/L $CaCO_3$: 154
3. Critical Flow, cfs: 141955
4. Mixing Zone Fraction: 0.3333
5. Harmonic Mean Flow, cfs: 366748
6. River Basin: Mississippi River, Segment No. 070301 and 070503
7. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply.

Information based on the following: LAC 33:IX Chapter 11. Hardness and 15% TSS data come from monitoring station 318 (Mississippi River at the Louisiana ferry landing near St. Francisville, midstream) listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc. This information was provided in a Memorandum from Todd Franklin to Christy Clark dated September 25, 2009 (See Appendix C).

B. Capitol Lake (Outfall 004)
1. River Basin: Mississippi River, Segment No. 070503
2. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

VII. Outfall Information:

Outfall 001

A. Type of wastewater - the batch discharge of treated process wastewater, contact and non-contact stormwater, boiler blowdown, non-contact cooling water, non-contact cooling tower blowdown, Iron Pond effluent, treated sanitary wastewater, effluent from the washdown area behind the Iron Pond, HF & HCL scrubber effluent, run-off from material loading and unloading areas, condensate from various area units, effluent from the Plasma Destruction Unit, discharge from secondary containment areas within units, and effluent from Outfall 003 in the event of a process or general plant activity upset, repair, or general maintenance.

B. Location - at the point of discharge near the property line of the Honeywell Plant and CN Railroad prior to exit from the Honeywell Plant. (Latitude 30°28'26", Longitude 91°11'16")

C. Treatment - treatment of process wastewaters consists of:
- pretreatment by chlorination, aeration, and clarification (sanitary wastewater)
- neutralization
- precipitation
- flocculation
- sedimentation
- air stripping
- final neutralization
- carbon beds (optional)

D. Flow - Batch, 0.594 MGD.

Process Wastewater*	0.4857 MGD
Utility Wastewater*	0.0793 MGD
Sanitary Wastewater*	0.02 MGD
Process Area Stormwater	0.013 MGD
Losses (to Muds)	(-)0.004 MGD

* Specific component waste streams are defined at Appendix A.

E. Receiving waters - Mississippi River via local drainage

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 003

A. Type of wastewater - the continuous discharge of non-contact cooling water, boiler steam condensate, non-process area stormwater runoff from in-plant streets and areas covered with limestone, grass, and asphalt/concrete, the controlled discharge of accumulated stormwater from gasoline and diesel storage tank containment areas, intermittent untreated process wastewater, and the washdown of in-plant roads and surfaces.

B. Location - at the point of discharge from the flume inside the Plant prior to exit from the plant.
(Latitude 30°28'24", Longitude 91°11'16")

C. Treatment - None

D. Flow - Intermittent, 0.533 MGD

E. Receiving waters - Mississippi River via local drainage

F. Basin and segment - Mississippi River Basin, 070301

Outfall 004

A. Type of wastewater - the intermittent discharge of non-process area stormwater runoff from in-plant streets, areas covered with limestone, grass, and asphalt/concrete, and limestone storage pile.

B. Location - at the point of discharge near the Tank Farm area facing Chippewa Street, prior to mixing with other waters in the parish municipal storm sewer system on Chippewa Street. (Latitude 30°28'38", Longitude 91°11'18")

C. Treatment - None

D. Flow - Intermittent, 0.04 MGD.

E. Receiving waters - sheetflow to parish municipal sewer treatment system thence into Capitol Lake

F. Basin and segment - Mississippi River Basin, Segment 070503

Outfall 005

A. Type of wastewater - the intermittent discharge of stormwater runoff from the on-site surface impoundment area.

B. Location - at the point of discharge behind the Solid Waste Impoundment Basin prior to combining with other waters. (Latitude 30°28'37", Longitude 91°11'45")

C. Treatment - None

D. Flow - Intermittent, 0.03 MGD

E. Receiving waters - Mississippi River via local drainage

F. Basin and segment - Mississippi River Basin, Segment 070301

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

A. Outfall 001 - Deletion of monitoring requirements for Total Ammonia (as N) and Total Phosphorus. These parameters were established to address

phosphorus and nitrogen impairments in the Mississippi River (Subsegment 070301) as indicated in the Court Ordered 303 (d) list at the time of the last permit issuance. The most recent listing for impaired waterbodies (the 2006 Final Integrated Report) did not contain phosphorus or nitrogen as impairments in Subsegment 070301, therefore, these parameters have been deleted.

The LDEQ is aware of the occurrence of a low oxygen hypoxic or "dead zone" in the Gulf of Mexico and its relationship to nutrients and fresh water from the Mississippi River and has developed a criteria development plan for state waters in coordination with the EPA to create defensible nutrient criteria based on the best available science. Work on criteria for the Mississippi River is an ongoing effort and will require further scientific investigation because of the complex nature of the large Mississippi watershed which includes over 30 states and two Canadian Provinces. A reopener clause has been established in the permit in accordance with LAC 33:IX.2903 which allows LDEQ to modify, or alternatively, revoke and reissue the permit to comply with any more stringent nutrient limitations or requirements that are promulgated in the future.

B. Outfall 001 - Permit limitations have increased due to an increase in process flow from 0.45646 MGD to 0.4947 MGD. These limitations were calculated in accordance with the OCPSF Guidelines at 40 CFR 414 (Subparts G and J).

C. Outfall 001 - The October 16, 1989 NPDES permit established limitations for two non-OCPSF regulated compounds, Bromoform and Chlorodibromomethane. The December 1, 1988 Fact Sheet indicated that the loadings derived for these compounds were based on the Carbon Tetrachloride allocation from 40 CFR 414, Subpart I. It has been determined that the Carbon Tetrachloride allocations used are from 40 CFR 414, Subpart J and that 40 CFR 414, Subpart I was referenced in error.

D. Outfall 001 - In the event of a process or general plant activity upset, repair, or general maintenance, effluent from Outfall 003 will be routed to Outfall 001. The outfall description has been revised to show this alternate routing.

E. Outfall 001 - In order to accurately represent the discharge conditions at this facility, the outfall description has changed from continuous to batch. As a result of this change, a footnote has been added stating that continuous monitoring is only applicable during times when the outfall is actually discharging.

F. Outfall 001 - The monitoring frequency for Hexachlorobenzene has been increased from 1/year to 1/quarter based upon Region 6 guidance that

Water Quality permitted parameters be monitored at a minimum of 1/quarter.

G. Outfall 003 - A footnote has been added stating that continuous monitoring is only applicable during times when the outfall is actually discharging.

H. Outfall 003 - The facility has identified new waste streams. As a result, the intermittent discharge of untreated process wastewater and the washdown of in-plant roads and surfaces have been added to the effluent discharge description. Due to these types of discharges being added to this outfall, 40 CFR 414 Subpart J (Direct Discharge Point Sources That Do Not Use End-of-Pipe Biological Treatment) concentration limitations have been established. The facility's request to include washdown of minor leaks and spills from process areas and loading and unloading of materials as part of this outfall description has been denied. Discharges of this nature are subject to the terms and conditions set forth in Part III.D.9 of the permit.

I. Outfall 004 - Zinc has been added as a parameter at this outfall for data gathering purposes due to its presence, as identified, in the analytical data submitted with the January 16, 2009 renewal application and the additional analytical data submitted on November 30, 2009. Monitoring and reporting requirements have been established at 1/quarter.

IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS, CONDITIONS, AND MONITORING REQUIREMENTS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII. Regulations also require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(i)].

1. **Outfall 001** - the batch discharge of treated process wastewater, contact and non-contact stormwater, boiler blowdown, non-contact cooling water, non-contact cooling tower blowdown, Iron Pond effluent, treated sanitary wastewater, effluent from the washdown area behind the Iron Pond, HF & HCL scrubber effluent, run-off from material loading and unloading areas, condensate from various area units, effluent from the Plasma Destruction Unit, discharge from secondary containment areas within units, and effluent from Outfall 003 in the event of a process or general plant activity upset, repair, or general maintenance.

Honeywell International, Inc., Honeywell Baton Rouge Plant is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Organic Chemical Manufacturing	40 CFR 414, Subpart(s) (G and J).

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous (*1)
pH Range Excursions No. of Events >60 minutes	---	0 (*2)	---	---	Continuous (*1)

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*2)	---	---	Continuous (*1)
pH (Standard Units)	---	---	Report (*2) (Min)	Report (*2) (Max)	Continuous (*1)
Temperature °F	---	---	Report	Report	Continuous (*1)
BOD_5	149	394	---	---	1/week
TSS	214	677	---	---	3/week
Fluoride	136.2	272.3	---	---	2/week
Total Residual Chlorine	4.5	7.4	---	---	1/week
Total Antimony	1.65	3.30	---	---	2/month
Total Chromium (mb)	4.58	11.43	---	---	1/month
Total Copper (mb)	5.98	13.95	---	---	1/month
Total Cyanide (mb)	1.73	4.95	---	---	1/year
Total Lead (mb)	1.32	2.85	---	---	1/month
Total Nickel (mb)	6.97	16.42	---	---	1/month
Total Zinc (mb)	4.33	10.77	---	---	1/week
Acrylonitrile	0.39	0.96	---	---	1/year
Benzene	0.24	0.55	---	---	1/year
Bromoform	0.59	1.57	---	---	1/week
Carbon Tetrachloride	0.59	1.57	---	---	1/week
Chlorobenzene	0.59	1.57	---	---	1/week

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Chlorodibromomethane	0.59	1.57	---	---	1/week
Chloroethane	0.45	1.22	---	---	1/year
Chloroform	0.46	1.34	---	---	1/week
1,2-Dichlorobenzene	0.81	3.28	---	---	1/year
1,3-Dichlorobenzene	0.59	1.57	---	---	1/year
1,4-Dichlorobenzene	0.59	1.57	---	---	1/year
1,1-Dichloroethane	0.09	0.24	---	---	1/year
1,2-Dichloroethane	0.74	2.37	---	---	1/week
1,1-Dichloroethylene	0.09	0.25	---	---	1/year
1,2-trans-Dichloroethylene	0.10	0.27	---	---	1/year
1,2-Dichloropropane	0.81	3.28	---	---	1/year
1,3-Dichloropropylene	0.81	3.28	---	---	1/year
Ethylbenzene	0.59	1.57	---	---	1/year
Methyl Chloride	0.45	1.22	---	---	1/year
Methylene Chloride	0.15	0.70	---	---	1/week
Tetrachloroethylene	0.21	0.68	---	---	1/week
Toluene	0.12	0.31	---	---	1/year
1,1,1-Trichloroethane	0.09	0.24	---	---	1/year
1,1,2-Trichloroethane	0.13	0.52	---	---	1/year
Trichloroethylene	0.11	0.28	---	---	1/year
Vinyl Chloride	0.40	0.71	---	---	1/year
2,4-Dimethylphenol	0.08	0.19	---	---	1/year
4,6-Dinitro-o-cresol	0.32	1.14	---	---	1/year

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated.		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
2,4-Dinitrophenol	4.98	17.70	---	---	1/year
2-Nitrophenol	0.27	0.95	---	---	1/year
4-Nitrophenol	0.67	2.38	---	---	1/year
Phenol	0.08	0.19	---	---	1/year
Acenaphthene	0.08	0.19	---	---	1/year
Acenaphthylene	0.08	0.19	---	---	1/year
Anthracene	0.08	0.19	---	---	1/year
Benzo(a)anthracene	0.08	0.19	---	---	1/year
Benzo(a)pyrene	0.08	0.20	---	---	1/year
3,4-Benzofluoranthene	0.08	0.20	---	---	1/year
Benzo(k)fluoranthene	0.08	0.19	---	---	1/year
Bis(2-ethylhexyl)phthalate	0.39	1.06	---	---	1/year
Chrysene	0.08	0.19	---	---	1/year
Diethyl phthalate	0.19	0.47	---	---	1/year
Dimethyl phthalate	0.08	0.19	---	---	1/year
Di-n-butyl phthalate	0.08	0.18	---	---	1/year
Fluoranthene	0.09	0.22	---	---	1/year
Fluorene	0.08	0.19	---	---	1/year
Hexachlorobenzene	0.49	1.18	---	---	1/year
Hexachlorobutadiene	0.59	1.57	---	---	1/year
Hexachloroethane	0.81	3.28	---	---	1/year
Naphthalene	0.08	0.19	---	---	1/year
Nitrobenzene	9.23	26.41	---	---	1/year

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Phenanthrene	0.08	0.19	---	---	1/year
Pyrene	0.08	0.20	---	---	1/year
1,2,4-Trichlorobenzene	0.81	3.28	---	---	1/year
Biomonitoring	See Section IX.D	---	---	---	1/year

(*1) When discharging.

(*2) The pH shall be within a range of 6.0 - 9.0 Standard Units at all times subject to the continuous monitoring pH range excursion provision in Part II, Paragraph H of the draft.

(mb) - metal bearing streams

Flow - This requirement has been established in accordance with LAC 33:IX.2707.I.1.b and retained from the current LPDES permit. The continuous monitoring frequency has also been retained.

pH - This requirement has been established in accordance with LAC 33:IX.1113.C.1 and retained from the current LPDES permit. The continuous monitoring frequency has also been retained.

Temperature - This requirement has been established in accordance with the LPDES Light Commercial General Permit (LAG48000), Schedule F and retained from the current LPDES permit. The continuous monitoring frequency has also been retained.

BOD_5 and TSS - Monthly average and daily maximum limitations have been established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart G (Bulk Organic Chemicals) with a process wastewater flow of 0.4947 MGD. Additionally, allocations have been given for sanitary wastewater and utility wastewater based on best professional judgment. Sanitary wastewater allocations are applied to a flow of 0.02 MGD and are based on concentrations of 30 mg/L monthly average and 45 mg/L daily maximum for both BOD_5 and TSS. Utility wastewater allocations are applied to a flow of 0.0793 MGD and are based on concentrations of 5 mg/L monthly average and 10 mg/L daily maximum for BOD_5 and 10 mg/L monthly average and 20 mg/L daily maximum for TSS. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequencies of 1/week for BOD_5 and 3/week

for TSS have been retained from the current LPDES permit.

Fluoride - Initially established in the April 29, 1984 NPDES permit. Fluoride limitations are based on concentrations of 33 mg/L (monthly average) and 66 mg/L (daily maximum) in Table 12-25 of the Proposed Inorganic Chemicals Development Document (ICDD), EPA 440-1-79/001, June 1980, Hydrofluoric Acid Subcategory and a flow of 0.594 MGD resulting in a monthly average limitation of 136.2 lbs/day and a daily maximum limitation of 27 lbs/day. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 2/week has been retained from the current LPDES permit.

Total Residual Chlorine - Initially established in the NPDES permit, effective November 1, 1995. The May 2, 1995 fact sheet states: " ... Total residual chlorine is based upon technology developed for the inorganic chemicals Development Document for the regulation of chlor-alkali production. The available chlorine is limited to 0.9 mg/L daily average and 1.5 mg/L daily maximum." Limitations were calculated based on concentrations of 0.9 mg/L monthly average and 1.5 mg/L daily maximum listed in Table 11-15 of the Inorganic Chemicals Development Document (ICDD), June 1982 and a flow of 0.594 MGD resulting in limitations of 4.5 lbs/day monthly average and 7.4 lbs/day daily maximum. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 1/week has been retained from the current permit.

Total Antimony - The December 1, 1988 NPDES Fact Sheet states: "...The Inorganic Chemical Development Document presented treatability data to show that antimony can be reduced to 0.4 mg/L average and 0.8mg/L daily maximum by the applications of lime and filter technology." Antimony limitations are based on concentrations of 0.4 mg/L monthly average, 0.8 mg/L daily maximum, and a process flow of 0.4947 MGD resulting in limitations of 1.65 lbs/day monthly average and 3.30 lbs/day daily maximum. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 2/month has been retained from the current LPDES permit.

Total Chromium, Total Copper, Total Cyanide, Total Lead, Total Nickel, and Total Zinc - Monthly average and daily maximum limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment and a flow of 0.4947 MGD. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequencies of 1/month for Total Chromium, Total Copper, Total Lead, and Total Nickel, 1/week for Total Zinc, and 1/year for Total Cyanide have been retained from the current LPDES permit.

Acrylonitrile, Benzene, Chloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-Crestol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenapthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4 Trichlorobenzene - Monthly average and daily maximum limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment and a flow of 0.4947 MGD. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 1/year has been retained from the current LPDES permit.

Carbon Tetrachloride, Chlorobenzene, Chloroform, Tetrachloroethylene, Methylene Chloride, and 1-2,Dichloroethane - Monthly average and daily maximum limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 1/week has been retained from the current LPDES permit.

Bromoform and Chlorodibromomethane - Initially established in the NPDES permit effective November 1, 1989 and retained from the current LPDES permit. Limitations have been established based upon loadings derived from allocations for Carbon Tetrachloride from 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment and a flow of 0.4947 MGD. See Appendix A for a more detailed explanation of limitation calculations. The monitoring frequency of 1/week has been retained from the current LPDES permit.

Hexachlorobenzene - Monthly average and daily maximum limitations have been established based upon water quality standards. See Appendix B for a more detailed explanation of limitation calculations. The monitoring frequency has been increased from 1/year to 1/quarter based on Region 6 guidance that water quality parameters be monitored at a minimum of 1/quarter.

Site-Specific Consideration(s)

Excursions - It is understood that there may be standing water in the flume housing the pH meter. Continuous monitoring should be done only when the outfall is discharging to waters of the state. Only those excursions that occur during a discharge to waters of the state should be reported.

2. **Outfall 003** - the intermittent discharge of non-contact cooling water, boiler steam condensate, non-process area stormwater runoff from in-plant streets and areas covered with limestone, grass, and asphalt/concrete, the controlled discharge of accumulated stormwater from gasoline and diesel storage tank containment areas, untreated process wastewater, and the washdown of in-plant roads and surfaces.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous (*1)
pH Range Excursions No. of Events >60 minutes	---	0 (*2)	---	---	Continuous (*1)
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*2)	---	---	Continuous (*1)
pH (Standard Units)	---	---	Report (*2) (Min)	Report (*2) (Max)	Continuous (*1)
TOC	---	---	---	50	1/week
Oil and Grease	---	---	---	15	1/week
Total Zinc	---	---	0.4	0.8	1/week
Total Chromium	---	---	1.110	2.770	1/year
Total Copper	---	---	1.450	3.380	1/year
Total Cyanide	---	---	0.420	1.200	1/year
Total Lead	---	---	0.320	0.690	1/year
Total Nickel	---	---	1.690	3.980	1/year
Acrylonitrile	---	---	0.094	0.232	1/year
Benzene	---	---	0.057	0.134	1/year
Carbon Tetrachloride	---	---	0.142	0.380	1/year

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Chlorobenzene	---	---	0.142	0.380	1/year
Chloroethane	---	---	0.110	0.295	1/year
Chloroform	---	---	0.111	0.325	1/year
1,2-Dichlorobenzene	---	---	0.196	0.794	1/year
1,3-Dichlorobenzene	---	---	0.142	0.380	1/year
1,4-Dichlorobenzene	---	---	0.142	0.380	1/year
1,1-Dichloroethane	---	---	0.022	0.059	1/year
1,2-Dichloroethane	---	---	0.180	0.574	1/year
1,1-Dichloroethylene	---	---	0.022	0.060	1/year
1,2-trans-Dichloroethylene	---	---	0.025	0.066	1/year
1,2-Dichloropropane	---	---	0.196	0.794	1/year
1,3-Dichloropropylene	---	---	0.196	0.794	1/year
Ethylbenzene	---	---	0.142	0.380	1/year
Methyl Chloride	---	---	0.110	0.295	1/year
Methylene Chloride	---	---	0.036	0.170	1/year
Tetrachloroethylene	---	---	0.052	0.164	1/year
Toluene	---	---	0.028	0.074	1/year
1,1,1-Trichloroethane	---	---	0.022	0.059	1/year
1,1,2-Trichloroethane	---	---	0.032	0.127	1/year
Trichloroethylene	---	---	0.026	0.069	1/year
Vinyl Chloride	---	---	0.097	0.172	1/year
2,4-Dimethylphenol	---	---	0.019	0.047	1/year
4,6-Dinitro-o-cresol	---	---	0.078	0.277	1/year

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
2,4-Dinitrophenol	---	---	1.207	4.291	1/year
2-Nitrophenol	---	---	0.065	0.231	1/year
4-Nitrophenol	---	---	0.162	0.047	1/year
Phenol	---	---	0.019	0.047	1/year
Acenaphthene	---	---	0.019	0.047	1/year
Acenaphthylene	---	---	0.019	0.047	1/year
Anthracene	---	---	0.019	0.047	1/year
Benzo(a)anthracene	---	---	0.019	0.047	1/year
Benzo(a)pyrene	---	---	0.020	0.048	1/year
3,4-Benzofluoranthene	---	---	0.020	0.048	1/year
Benzo(k)fluoranthene	---	---	0.019	0.047	1/year
Bis(2-ethylhexyl) phthalate	---	---	0.095	0.258	1/year
Chrysene	---	---	0.019	0.047	1/year
Diethyl phthalate	---	---	0.046	0.113	1/year
Dimethyl phthalate	---	---	0.019	0.047	1/year
Di-n-butyl phthalate	---	---	0.020	0.043	1/year
Fluoranthene	---	---	0.022	0.054	1/year
Fluorene	---	---	0.019	0.047	1/year
Hexachlorobenzene	---	---	0.196	0.794	1/year
Hexachlorobutadiene	---	---	0.142	0.380	1/year
Hexachloroethane	---	---	0.196	0.794	1/year
Naphthalene	---	---	0.019	0.047	1/year
Nitrobenzene	---	---	2.237	6.402	1/year

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Phenanthrene	---	---	0.019	0.047	1/year
Pyrene	---	---	0.020	0.048	1/year
1,2,4-Trichlorobenzene	---	---	0.196	0.794	1/year
Biomonitoring	See Section IX.D	---	---	---	1/year

(*1) When discharging.

(*2) The pH shall be within a range of 6.0 - 9.5 Standard Units at all times subject to the continuous monitoring pH range excursion provision in Part II, Paragraph H of the draft permit.

Flow - This requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit. The continuous monitoring frequency has also been retained.

pH - Limitations of 6.0 standard units (min) and 9.5 standard units (max) initially established in the November 1, 1995 NPDES permit based upon "information and agreements expressed in a May 5,1992 letter from the plant manager", due to the area being stabilized with limestone, have been retained from the current LPDES permit. The continuous monitoring frequency has also been retained.

TOC and Oil & Grease- Daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been retained from the current LPDES permit and are in accordance with the LPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activities, Sector C (LAR050000), effective May 1, 2006. The monitoring frequency of 1/week has also been retained.

Total Zinc - Established in the NPDES permit, effective October 16, 1989. Limitations of 0.4 mg/L monthly average and 0.8 mg/L daily maximum have been retained from the current LPDES permit based on BPJ. The monitoring frequency of 1/week has also been retained.

Acrylonitrile, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, 1,1-Dichloroethane, 1-2,Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-Crestol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenapthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4 Trichlorobenzene, Total Chromium, Total Copper, Total Lead, Total Nickel, and Total Cyanide - Monthly average and daily maximum concentration limitations have been established based upon 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment due to the addition of untreated process wastewater and the washdown of in-plant roads and surfaces as new waste streams at this outfall. The monitoring frequency has been established at 1/year.

Site-Specific Consideration(s)

Excursions - It is understood that there may be standing water in the flume housing the pH meter. Continuous monitoring should be done only when the outfall is discharging to waters of the state. Only those excursions that occur during a discharge to waters of the state should be reported.

3. **Outfall 004** - the intermittent discharge of non-process area stormwater runoff from in-plant streets, areas covered with limestone, grass, and asphalt/concrete, and limestone storage pile.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/quarter
TOC	---	---	---	50	1/quarter
Oil & Grease	---	---	---	15	1/quarter
Zinc	---	---	Report	Report	1/quarter
pH Standard Units	---	---	6.0 (min)	9.5 (max)	1/quarter

Flow - This requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit. The monitoring frequency has also been retained.

TOC and Oil & Grease - Daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been retained from the current LPDES permit. These limitations are consistent with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and the requirements of the LPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activities, Sector C (LAR050000), effective May 1, 2006. The monitoring frequency of 1/month has also been retained.

pH - Limitations of 6.0 standard units (min) and 9.5 standard units (max) have been retained from the current LPDES permit, effective March 1, 2004. The limitations were established based on BPJ due to the area being stabilized with limestone. The monitoring frequency of 1/quarter has also been retained.

Zinc - Report requirement has been established for data gathering purposes based on BPJ. The monitoring frequency has been established at 1/quarter.

Other Requirements Applicable to All Stormwater

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. **For first time permit issuance,** the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. **For renewal permit issuance,** the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].

4. Outfall 005 - the intermittent discharge of stormwater runoff from the on-site surface impoundment area

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/quarter
TOC	---	---	---	50	1/quarter
Oil & Grease	---	---	---	15	1/quarter
pH Standard Units	---	---	6.0 (min)	9.5 (max)	1/quarter

Flow - This requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit. The monitoring frequency has also been retained.

TOC and Oil & Grease - Daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been retained from the current LPDES permit. These limitations are consistent with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and the requirements of the LPDES Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activities, Sector C (LAR050000), effective May 1, 2006. The monitoring frequency of 1/month has been retained from the current LPDES permit.

pH - Limitations of 6.0 standard units (min) and 9.5 standard units (max) have been retained from the current LPDES permit, effective March 1, 2004. The limitations were established based on BPJ due to the area being stabilized with limestone. The monitoring frequency of 1/quarter has also been retained.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, October 7, 2009. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface

Water Quality Standards, LDEQ, October 7, 2009, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
Hexachlorobenzene

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, October 7, 2009. They are also listed in Part II of the permit.

TMDL Waterbodies

Outfalls 001, 003, and 005

The discharges from outfalls 001, 003, and 005 include treated process wastewater, contact and non-contact stormwater, boiler blowdown, non-contact cooling water, non-contact cooling tower blowdown, Iron Pond effluent, treated sanitary wastewater, effluent from the washdown area behind the Iron Pond, HF & HCL scrubber effluent, run-off from material loading and unloading areas, condensate from various area units, effluent from the Plasma Destruction Unit, discharge from secondary containment areas within units, and effluent from Outfall 003 in the event of a process or general plant activity upset, repair, or general maintenance (001), non-contact cooling water, boiler steam condensate, non-process area stormwater runoff from in-plant streets and areas covered with limestone, grass, and asphalt/concrete, the controlled discharge of accumulated stormwater from gasoline and diesel storage tank containment areas, untreated process wastewater, and the washdown of in-plant roads and surfaces (003), and stormwater runoff from the on-site surface impoundment area (005) to the Mississippi River, Segment No. 070301 via local drainage. The Mississippi River is not listed on the 2006 Final Integrated Report as being impaired. Therefore, no additional requirements have been established in this permit.

Outfall 004

The discharge from outfall 004 includes non-process area stormwater runoff from in-plant streets, areas covered with limestone, grass, and asphalt/concrete, and limestone storage pile. Subsegment 070503, Capitol Lake, is listed on LDEQ's Final 2006 303(d) List as impaired for nutrients (EPA-5), organic enrichment/low DO (EPA-5), and pathogen

indicators. To date no TMDL's have been established.

Nutrients, Organic Enrichment/Low DO

DO and nutrient impairments are typically attributed to improperly operated on-site domestic wastewater treatment systems, decentralized wastewater treatment, fill/drainage, crop production and unsewered residential districts. Additionally, no LDEQ finalized TMDL recognizes non-process waste streams, such as those consisting mainly of stormwater, as point source contributors to DO and nutrient impairments where TMDLs have been established for these impairments.

However, in an effort to address the impairments during the development of the draft permit, TOC monitoring has been identified as a means of measuring organic materials in a discharge. Given the types of discharges and the suspected cause of the impairments, this Office has determined that it is appropriate to retain the 50 mg/L daily maximum limitation for TOC on this outfall as an indicator parameter to monitor the organic constituents in the waste stream. The TOC limitation was originally established using stormwater guidance, in a letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and has been used in water discharge permits for similar types of discharges for 20 years and considered protective of waters of the state.

Pathogen Indicators

Pathogen indicator impairments are typically associated with discharges of sanitary wastewater. Since these outfalls contain low contamination potential stormwater only, LDEQ has determined that there is no reasonable potential for the stormwater discharges to cause further pathogen indicator impairments to the receiving waterbody. Therefore, no additional requirements have established.

A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics.

Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfalls 001 and 003 are as follows:

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	1/year
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	1/year

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.04%, 0.05%, 0.07%, 0.09%, and 0.1%. The low-flow effluent concentration (critical dilution) is defined as 0.09% effluent.

X. Compliance History/DMR Review:

A. DMRs for the period of January 2007 to August 2009 were reviewed. The following excursions were found:

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
01/07	Total Zinc	003	---	2.1 mg/L	---	0.8 mg/L
12/07	TSS	001	---	995 mg/l	---	626 mg/L
12/07	Total Fluoride	001	---	260 mg/L	---	251 mg/L
04/08	pH excursions > 60 min	001	1	---	0	---
05/08	Total Antimony	001	---	4.79 mg/L	---	4.0 mg/L
05/08	pH excursions > 60 min	003	1	---	0	---
07/08	pH excursions > 60 min	003	1	---	0	---
09/08	pH excursions > 60 min	003	6	---	0	---
09/08	pH range excursions, monthly total accumulation	003	1561 min	---	446 min	---
09/08	Total Zinc	003	1.8 mg/L	7.0 mg/L	0.4 mg/L	0.8 mg/L

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
09/08	pH excursions > 60 min	001	3	---	0	---
09/08	pH range excursions, monthly total accumulation	001	2643 min	---	446 min	---
10/08	pH excursions > 60 min	003	1	---	0	---
11/08	pH excursions > 60 min	003	1	---	0	---
01/09	pH excursions > 60 min	003	1	---	0	---

* Due to permit excursions during the last two years, this facility has been referred to enforcement via e-mail on January 13, 2010.

B. Inspection

Date of last inspection: 08/14/2008
Type of inspection: Water
Inspected by: Louis Martin
Findings: flow meter calibration records incomplete, thermometers in composite sampler and refrigerators were expired in reference to certification, facility not documenting calibration numbers on bench sheets, DMRs showed permit limit excursions.

C. Enforcement Actions - A review of records from January 2007 to December 2009 yielded the following:

Air - No open Enforcement Actions
Hazardous Waste - HE-CN-08-0425 issued October 31, 2008 (EDMS Document ID 38596050)
Solid Waste - SE-CN-09-0299 issued on December 30, 2009 (EDMS Document ID 45006715)
Water - No open Enforcement Actions

XI. "IT" Questions - Applicant's Responses

The "IT" Questions along with the applicant's responses can be found in the Permit Application (dated January 15, 2009).

XII. Endangered Species:

Outfalls 001, 003, and 005

The receiving waterbody, Subsegment 070301 of the Mississippi River Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as a threatened and/or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated January 5, 2010 from Rieck (FWS) to Nolan (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and after consultation with FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

Outfall 004

The receiving waterbody, Subsegment 070503 of the Mississippi River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS).

XIII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

Appendix A

Revised 08/13/08 LA0000329, AI289 Appendix A-1 Page 1

02/04/2010 Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

(*1) TABLE 1

Permittee:	Honeywell International, Inc., Baton Rouge Plant
Permit Number:	LA0000329, AI289
Appendix	Appendix A-1
[] Flow Basis 1=proc, 0=all	0
Concentration flow, (MGD)	---
GL vs Old, 0=n, 1=y, 2=GL+Old	1
Outfall number	Out. 001
Deepwell fract., 40 CFR 122.50	

(*2)

OCPSF Subpart I=1, J=2	2	
OCPSF PROCESS FLOW CALCULATION:	MGD	gpm
Genetron Units	0.37	
G-23 Unit	0.036	
Waste Treatment Tank	0.0002	
Process Area Stormwater	0.013	
CaCl2 Unit	0.0795	
Losses to Muds	-0.004	
TOTAL PROCESS FLOW:	0.4947	---
BOD5/TSS BPJ ALLOCATION FLOWS:	MGD	gpm
SANITARY WW:	0.02	
MISCELLANEOUS:	MGD	gpm
TOTAL MISCELLANEOUS FLOWS:	---	---
UTILITY WASTEWATER:	MGD	gpm
Non-contact Cooling Water	0.0505	
Boiler Blowdown	0.0288	
TOTAL UTILITY WW FLOWS:	0.0793	---
TOTAL OCPSF+BPJ FLOW:	0.594	---

(*3)

Fract =0, []=1	1	Fraction of OCPSF Conc. or BPJ [] BOD,avg	BOD,max	TSS,avg	TSS,max
Miscellaneous WW		0.5	0.5	0.5	0.5
Misc. WW, mg/L		5	10	10	20
Utility WW		0.25	0.25	0.25	0.25
Utility WW, mg/L		5	10	10	20
Sanitary, mg/L		30	45	30	45

Conversion Factors:

Conv mg/L-->lbs/da	8.34
Conv ug/L-->mg/L:	0.0001
Conv gpm-->MGD:	0.00144

(*4)

Metal+CN Flows:	MGD	gpm
Total Chromium	0.4947	
Total Copper	0.4947	
Total Lead	0.4947	
Total Nickel	0.4947	
Total Zinc	0.4947	
Total Cyanide	0.4947	

(*5)

OCPSF Guideline Subpart:	Prod. 1000 lbs per day	Prod. Fraction of Total
B, Rayon Fibers		---
C, Other Fibers		---
D, Thermoplastic Resins		---
E, Thermosetting Resins		---
F, Commodity Organics		---
G, Bulk Organics		1
H, Specialty Organics		---
Total:	---	1

(*6)

COD & TOC Ratios:	Average	Maximum
COD/BOD5 ratio		
TOC/BOD5 ratio		
COD,TOC, O&G []:	Average	Maximum
COD, mg/L		
TOC, mg/L		
O&G, mg/L		

(*7)

INORGANIC GUIDELINES:

New Source 1=y 0=n	0	Prod.		
O Fraction=0, []=1	0	1000 lbs	Flow	Flow
40 CFR 415		per day	MGD	gpm
40 CFR 415.63 Mercury				
40 CFR 415.63 Diaphragm				

(*8)

OCPSF Alternate Flows:	MGD
Conventionals:	
Organic Toxics:	---
Process Waste Water	
Process Stormwater	

(*9)

Page and Table Numbering	1=y, 0=n
1st Input Page	1
2nd Input Page	0
OCPSF	1
SS Metals	0
Inorganic	1
Fertilizer	0
Pesticides	0
COD/TOC/O&G Tbl	0
BOD/TSS Tbl	1
Table Designation Sequence	
Pesticides &OCPSF	0
PestMetal 1=y, 0=n	0

Flow (*10)

MGD	COD and TOC limits, precalc	
---	COD,Avg (lbs/day)	0
---	COD,Max (lbs/day)	0
---	TOC,Avg (lbs/day)	0
	TOC,Max (lbs/day)	0

OCPSF BOD5

OCPSF Fraction	Avg	Max
	1	1
	1	1
	1	1
	1	1

OCPSF+Inorganic 0.594

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

Out. 001

Conventional pollutant loading calculations, BOD5 and TSS

TABLE 2

Calculation of BOD5, and TSS limits:

(*1)	(*2)	(*3)	(*4)	(*5)	(*6)	(*7)	(*8)	(*9)	(*10)	(*11)	(*12)	(*13)
OCPSF GL 40 CFR 414 Subpart:	BOD5 Avg mg/L	BOD5 Max mg/L	TSS Avg mg/L	TSS Max mg/L	Prod. 1000 lbs per day	Prod. Fraction of Total	Process Flow (MGD)	Conv. Factor	BOD5 Avg lbs/day	BOD5 Max lbs/day	TSS Avg lbs/day	TSS Max lbs/day
B, Rayon Fibers							---	8.34	---	---	---	---
C, Other Fibers							---	8.34	---	---	---	---
D,Thermoplastic Resins							---	8.34	---	---	---	---
E,Thermosetting Resins							---	8.34	---	---	---	---
F, Commodity Organics							---	8.34	---	---	---	---
G, Bulk Organics	34	92	49	159		1	0.4947	8.34	140.2771	379.5734	202.1641	656.0019
H, Specialty Organics							---	8.34	---	---	---	---
Total/Weighted[]	34	92	49	159		1	0.4947	8.34	140.2771	379.5734	202.1641	656.0019

BPJ Sources/Guidelines	BOD5 Avg	BOD5 Max	TSS Avg	TSS Max			Flow	Conv. Factor	BOD5 Avg	BOD5 Max	TSS Avg	TSS Max
BPJ Sources:	mg/L	mg/L	mg/L	mg/L			(MGD)		lbs/day	lbs/day	lbs/day	lbs/day
Sanitary WW:	30	45	30	45			0.02	8.34	5.004	7.506	5.004	7.506
Miscellaneous:							---	8.34	---	---	---	---
Utility Wastewater:	5	10	10	20			0.0793	8.34	3.30681	6.61362	6.61362	13.22724
							---	8.34	---	---	---	---
							---	8.34	---	---	---	---
							---	8.34	---	---	---	---
BPJ Source Total:							0.0993		8.31081	14.11962	11.61762	20.73324

Other Guidelines: Inorganic 40 CFR 415	BOD5 Avg mg/L	BOD5 Max mg/L	TSS Avg lbs/1000	TSS Max lbs/1000	Prod. 1000 lbs per day	Flow to Tmt. Plt. Fraction	Flow (MGD)	Conv. Factor	BOD5 Avg lbs/day	BOD5 Max lbs/day	TSS Avg lbs/day	TSS Max lbs/day
					---	---	---	8.34	---	---	---	---
					---	---	---	8.34	---	---	---	---
					---	---	---	8.34	---	---	---	---
					---	---	---	8.34	---	---	---	---

	BOD5 Avg lbs/1000	BOD5 Max lbs/1000	TSS Avg lbs/1000	TSS Max lbs/1000	Prod. 1000 lbs per day	Flow to Tmt. Plt. Fraction	Flow (MGD)		BOD5 Avg lbs/day	BOD5 Max lbs/day	TSS Avg lbs/day	TSS Max lbs/day
					---	---	---		---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Other Guideline Total (lbs/day)							---		---	---	---	---
BOD5/TSS Grand Total (lbs/day)							0.594		148.5879	393.693	213.7817	676.7351

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

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Toxic pollutant loading calculations, heavy metals, TRC, and Cyanide

TABLE 3

40 CFR 414 OCPSF, 40 CFR 415, and 40 CFR 455 as applicable

(*1) Subcategory and/or Source	(*2) Chromium Avg mg/L	(*3) Chromium Max mg/L	(*4) Copper Avg mg/L	(*5) Copper Max mg/L	(*6) Prod. 1000 lbs per day	(*7) Flow to Tmt. Plt. Fraction	(*8) Chromium Flow (MGD)	(*9) Copper Flow (MGD)	(*10) Chromium Avg lbs/day	(*11) Chromium Max lbs/day	(*12) Copper Avg lbs/day	(*13) Copper Max lbs/day
OCPSF Subpart J +BPJ	1.11	2.77	1.45	3.38			0.4947	0.4947	4.579636	11.42846	5.982407	13.9452
									---	---	---	---
									---	---	---	---
	Avg lbs/1000	Max lbs/1000	Avg lbs/1000	Max lbs/1000								
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Total							0.4947	0.4947	4.579636	11.42846	5.982407	13.9452

Subcategory and/or Source	Lead Avg mg/L	Lead Max mg/L	Nickel Avg mg/L	Nickel Max mg/L	Prod. 1000 lbs per day	Flow to Tmt. Plt. Fraction	Lead Flow (MGD)	Nickel Flow (MGD)	Lead Avg lbs/day	Lead Max lbs/day	Nickel Avg lbs/day	Nickel Max lbs/day
OCPSF Subpart J +BPJ	0.32	0.69	1.69	3.98			0.4947	0.4947	1.320255	2.846801	6.972599	16.42068
									---	---	---	---
									---	---	---	---
	Avg lbs/1000	Max lbs/1000	Avg lbs/1000	Max lbs/1000								
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Total							0.4947	0.4947	1.320255	2.846801	6.972599	16.42068

Subcategory and/or Source	Zinc Avg mg/L	Zinc Max mg/L	Cyanide Avg mg/L	Cyanide Max mg/L	Prod. 1000 lbs per day	Flow to Tmt. Plt. Fraction	Zinc Flow (MGD)	Cyanide Flow (MGD)	Zinc Avg lbs/day	Zinc Max lbs/day	Cyanide Avg lbs/day	Cyanide Max lbs/day
OCPSF Subpart J +BPJ	1.05	2.61	0.42	1.2			0.4947	0.4947	4.332088	10.76833	1.732835	4.950958
									---	---	---	---
									---	---	---	---
	Avg lbs/1000	Max lbs/1000	Avg lbs/1000	Max lbs/1000								
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Total							0.4947	0.4947	4.332088	10.76833	1.732835	4.950958

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

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Toxic pollutant loading calculations, heavy metals, TRC, and Cyanide

TABLE 3

40 CFR 415 and 40 CFR 455 as applicable

(*1) Subcategory	(*2) TRC Avg lbs/1000	(*3) TRC Max lbs/1000	(*4) Total An Avg lbs/1000	(*5) Total An Max lbs/1000	(*6) Prod. 1000 lbs per day	(*7) Flow to Tmt. Plt. Fraction	(*8) TRC Flow (MGD)	(*9) Total Ant Flow (MGD)	(*10) TRC Avg lbs/day	(*11) TRC Max lbs/day	(*12) Total An Avg lbs/day	(*13) Total An Max lbs/day
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Other Sources, BPJ (Flow Based)	Avg mg/L	Max mg/L	Avg mg/L	Max mg/L					Avg lbs/day	Max lbs/day	Avg lbs/day	Max lbs/day
Process WW [*1]	0.9	1.5	0.4	0.8			0.594	0.4947	4.458564	7.43094	1.650319	3.300638
							---		---	---	---	---
Total							0.594		4.458564	7.43094	1.650319	3.300638

[*1] Limits are based on Table 11-15 of the Inorganic Chemicals Development Document (ICDD), Chlor-Alkali subcategory, and similarly permitted facilities.

Subcategory	Cyanide A Avg lbs/1000	Cyanide A Max lbs/1000	Cyanide A Avg lbs/1000	Cyanide A Max lbs/1000	Prod. 1000 lbs per day	Flow to Tmt. Plt. Fraction	Cyanide A Flow (MGD)	Fluoride Flow (MGD)	Cyanide A Avg lbs/day	Cyanide A Max lbs/day	Fluoride Avg lbs/day	Fluoride Max lbs/day
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
					---	---			---	---	---	---
Other Sources, BPJ (Flow Based)	Avg mg/L	Max mg/L	Avg mg/L	Max mg/L					Avg lbs/day	Max lbs/day	Avg lbs/day	Max lbs/day
Process WW							---		---	---	---	---
BPJ-Process Flow [*2]			33	66			---	0.4947	---	---	136.1513	272.3027
							---		---	---	---	---
Total							---	0.4947	---	---	136.1513	272.3027

[*2] Fluoride limitations based on concentrations in Table 12-25 of the Proposed Inorganic Chemicals Development Document (ICDD), EPA 440/1-79/007, June 1980, Hydrofluoric Acid Subcategory. These limitations which were initially established in the NPDES permit, effective date 4/29/84, and are now considered BAT for this facility.

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

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TABLE 4

Calculation Summary of Conventional and Non-Conventional Limits

(*1) Parameter	(*2) G/L-BPJ Avg. mg/L	(*3) G/L-BPJ Max mg/L	(*4) Process Flow (MGD)	(*5) G/L-BPJ Avg lbs/day	(*6) G/L-BPJ Max lbs/day	(*7) Tech Avg lbs/day	(*8) Old Tech Old Anti-Back Max0=no scr. lbs/day1=OldvsGL 2=Old+GL	(*9) Out. 001 Avg lbs/day	(*10) Out. 001 Max lbs/day	(*11) Out. 001 Avg mg/L	(*12) Out. 001 Max mg/L
CONVENTIONAL											
BOD5				148.5879	393.693		---	149	394	---	---
TSS				213.7817	676.7351		---	214	677	---	---
Oil and Grease				---	---		---	---	---	---	---
NON-CONVENTIONAL											
COD				---	---		---	---	---	---	---
TOC				---	---		---	---	---	---	---
TRC				4.458564	7.43094		---	4.5	7.4	---	---
Ammonia Nitrogen				---	---		---	---	---	---	---
Organic Nitrogen				---	---		---	---	---	---	---
Nitrate Nitrogen				---	---		---	---	---	---	---
Total Fluoride [*2]				136.1513	272.3027		---	136.2	272.3	---	---

Calculation Summary of Metal and Cyanide Toxic Limits

(*1)	(*2) G/L-BPJ Avg. mg/L	(*3) G/L-BPJ Max mg/L	(*4) Process Flow (MGD)	(*5) G/L-BPJ Avg lbs/day	(*6) G/L-BPJ Max lbs/day	(*7) Tech Avg lbs/day	(*8) Old Tech Old Anti-Back Max0=no scr. lbs/day1=OldvsGL 2=Old+GL	(*9) Out. 001 Avg lbs/day	(*10) Out. 001 Max lbs/day	(*11) Out. 001 Avg mg/L	(*12) Out. 001 Max mg/L
METALS AND CYANIDE											
Total Chromium	1.11	2.77	0.4947	4.579636	11.42846		---	4.58	11.43	---	---
Total Copper	1.45	3.38	0.4947	5.982407	13.9452		---	5.98	13.95	---	---
Total Lead	0.32	0.69	0.4947	1.320255	2.846801		---	1.32	2.85	---	---
Total Nickel	1.69	3.98	0.4947	6.972599	16.42068		---	6.97	16.42	---	---
Total Zinc	1.05	2.61	0.4947	4.332088	10.76833		---	4.33	10.77	---	---
Total Antimony [*3]	0.4	0.8	0.4947	1.650319	3.300638		---	1.65	3.30	---	---
Total Cyanide	0.42	1.2	0.4947	1.732835	4.950958		---	1.73	4.95	---	---
Amenable Cyanide				---	---		---	---	---	---	---

[*3] Non-OCPSF parameters are based on 1989 NPDES permit and the ICDD concentrations of 0.4 mg/L mo avg and 0.8 mg/L dly max.

				---	---		---	---	---	---	---
				---	---		---	---	---	---	---

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

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Calculation of Toxic Limits, OCPSF Subpart J

TABLE 5

(*1) OCPSF Parameter Subpart J	(*2) G/L Val Avg. mg/L	(*3) G/L Val Max mg/L	(*4) Process Flow (MGD)	(*5) G/L Val Avg lbs/day	(*6) G/L Val Max lbs/day	(*7) Tech Old Avg lbs/day	(*8) Tech Old Max0=no scr. lbs/day1=OldvsGL 2=Old+GL	(*9) G/L-BPJ	(*10) Out. 001 Avg lbs/day	(*11) Out. 001 Max lbs/day	(*12) Out. 001 Avg mg/L	(*13) Out. 001 Max mg/L
VOLATILE COMPOUNDS												
Acrylonitrile	0.094	0.232	0.4947	0.387825	0.957185			---	0.39	0.96	---	---
Benzene	0.057	0.134	0.4947	0.23517	0.552857			---	0.24	0.55	---	---
Bromoform[*4]	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Carbon Tetrachloride	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Chlorobenzene	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Chloro-dibromomethane [*4]	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Chloroethane	0.11	0.295	0.4947	0.453838	1.21711			---	0.45	1.22	---	---
Chloroform	0.111	0.325	0.4947	0.457964	1.340884			---	0.46	1.34	---	---
1,2-Dichlorobenzene	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---
1,3-Dichlorobenzene	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
1,4-Dichlorobenzene	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
1,1-Dichloroethane	0.022	0.059	0.4947	0.090768	0.243422			---	0.09	0.24	---	---
1,2-Dichloroethane	0.18	0.574	0.4947	0.742644	2.368208			---	0.74	2.37	---	---
1,1-Dichloroethylene	0.022	0.06	0.4947	0.090768	0.247548			---	0.09	0.25	---	---
1,2-trans-Dichloro-ethylene	0.025	0.066	0.4947	0.103145	0.272303			---	0.10	0.27	---	---
1,2-Dichloropropane	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---
1,3-Dichloropropylene	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---
Ethylbenzene	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Methyl Chloride	0.11	0.295	0.4947	0.453838	1.21711			---	0.45	1.22	---	---
Methylene Chloride	0.036	0.17	0.4947	0.148529	0.701386			---	0.15	0.70	---	---
Tetrachloroethylene	0.052	0.164	0.4947	0.214541	0.676631			---	0.21	0.68	---	---
Toluene	0.028	0.074	0.4947	0.115522	0.305309			---	0.12	0.31	---	---
1,1,1-Trichloroethane	0.022	0.059	0.4947	0.090768	0.243422			---	0.09	0.24	---	---
1,1,2-Trichloroethane	0.032	0.127	0.4947	0.132026	0.523976			---	0.13	0.52	---	---
Trichloroethylene	0.026	0.069	0.4947	0.107271	0.28468			---	0.11	0.28	---	---
Vinyl Chloride	0.097	0.172	0.4947	0.400202	0.709637			---	0.40	0.71	---	---
ACID COMPOUNDS												
2-Chlorophenol												
2,4-Dichlorophenol												
2,4-Dimethylphenol	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
4,6-Dinitro-o-cresol	0.078	0.277	0.4947	0.321812	1.142846			---	0.32	1.14	---	---
2,4-Dinitrophenol	1.207	4.291	0.4947	4.979838	17.7038			---	4.98	17.70	---	---
2-Nitrophenol	0.065	0.231	0.4947	0.268177	0.953059			---	0.27	0.95	---	---
4-Nitrophenol	0.162	0.576	0.4947	0.668379	2.37646			---	0.67	2.38	---	---
Phenol	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---

[*4] Non-OCPSF parmaters, basis retained from the previously issued LPDES Permit, effective March 1, 2004.

Calculation of Technology Based Limits for Honeywell International, Inc., Baton Rouge Plant

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Calculation of Toxic Limits, OCPSF Subpart J

TABLE 5

(*1) OCPSF Parameter Subpart J	(*2) G/L Val Avg. mg/L	(*3) G/L Val Max mg/L	(*4) Process Flow (MGD)	(*5) G/L Val Avg lbs/day	(*6) G/L Val Max lbs/day	(*7) Tech Old Avg lbs/day	(*8) Tech Old Max0=no scr. lbs/day1=OldvsGL 2=Old+GL	(*9) Anti-Back	(*10) Out. 001 Avg lbs/day	(*11) Out. 001 Max lbs/day	(*12) Out. 001 Avg mg/L	(*13) Out. 001 Max mg/L
BASE/NEUTRAL COMPOUNDS												
Acenaphthene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Acenaphthylene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Anthracene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Benzo(a)anthracene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Benzo(a)pyrene	0.02	0.048	0.4947	0.082516	0.198038			---	0.08	0.20	---	---
3,4-Benzofluoranthene	0.02	0.048	0.4947	0.082516	0.198038			---	0.08	0.20	---	---
Benzo(k)fluoranthene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Bis(2-ethylhexyl)-phthalate	0.095	0.258	0.4947	0.391951	1.064456			---	0.39	1.06	---	---
Chrysene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Diethyl phthalate	0.046	0.113	0.4947	0.189787	0.466215			---	0.19	0.47	---	---
Dimethyl phthalate	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Di-n-butyl phthalate	0.02	0.043	0.4947	0.082516	0.177409			---	0.08	0.18	---	---
2,4-Dinitrotoluene												
2,6-Dinitrotoluene												
Fluoranthene	0.022	0.054	0.4947	0.090768	0.222793			---	0.09	0.22	---	---
Fluorene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Hexachlorobenzene	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---
Hexachlorobutadiene	0.142	0.38	0.4947	0.585863	1.567803			---	0.59	1.57	---	---
Hexachloroethane	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---
Naphthalene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Nitrobenzene	2.237	6.402	0.4947	9.22941	26.41336			---	9.23	26.41	---	---
Phenanthrene	0.019	0.047	0.4947	0.07839	0.193913			---	0.08	0.19	---	---
Pyrene	0.02	0.048	0.4947	0.082516	0.198038			---	0.08	0.20	---	---
1,2,4-Trichlorobenzene	0.196	0.794	0.4947	0.808656	3.275884			---	0.81	3.28	---	---

APPENDIX A-2 LA0000329, AI No. 289

Documentation and Explanation of Technology Calculations
and Associated Lotus Spreadsheet

This is a multi-sector technology spreadsheet covering the following four guidelines: 40 CFR 414, Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF), 40 CFR 415.62 and 40 CFR 415.63, Chlor-Alkali Subcategory of Subpart F of the Inorganic Chemical Guidelines and other Inorganic Chemical Guideline subparts on a case-by-case basis, 40 CFR 418, Fertilizer Manufacturing Guidelines, Subparts B, C, D, and E / BPJ Nitrogen Sources, and 40 CFR 455, Subpart A, Pesticide Chemicals Guidelines, Organic Pesticide Chemicals Manufacturing Subcategory. Other guidelines maybe included on a case-by-case basis. Regulations at 40 CFR 144(a)/LAC 33.IX.2707 require that technology-based permit limitations be placed in permits based on effluent limitations guidelines where applicable, on Best Professional Judgement (BPJ) in the absence of guidelines or on a combination of the two. Best Available Technology Economically Achievable (BAT) guideline factors and concentrations are used for non-conventional and toxic pollutants. In the absence of BAT, Best Conventional Pollutant Control Technology (BCT) is used for non-conventional pollutants. In the absence of either BAT or BCT, Best Practicable Control Technology (BPT) is used for conventional and non-conventional pollutants. BPT is used for conventional pollutants. New Source Performance Standards (NSPS) are used as the situation dictates, however in the case of the OCPSF guidelines, NSPS=BAT. In the absence of an applicable guideline for a particular parameter, BPJ shall be utilized. The term, "monthly average" or "average", refers to the 30-day monthly average of daily maximum values, "daily maximum" or "maximum", refers to the maximum for any one day. The term, "previous permit," refers to the most recently issued NPDES or LPDES permit. The spreadsheet was programmed with the capability of addressing pollutant loadings and associated BPJ allocations for any, all, or a combination of the above mentioned guidelines at a designated outfall. If the previous permit did not give a BPJ allowance for particular wastewater, none will be granted in the reissuance in accordance with CWA 402(o), and 40 CFR 122.44.l/LAC 33.IX.2707.L. The spreadsheet is set up in a table and column/section format. Each table represents a general category for data input or calculation points. Each reference column or section is marked by a set of parentheses enclosing a number and asterisk, for example (*1) or (*10). These columns or sections represent inputs, existing data sets, calculation points, or results for determining technology based limits for an effluent of concern.

Table 1

Table 1 is a data input area primarily for the OCPSF guidelines and the inorganic chemical guidelines, Sections (*2), (*3), (*4), (*5), (*6), (*7), (*8), (*10), and (*11). The Page and Table numbering sequence section, Section (*9) is used for applicable guideline(s) as well as the generalized input information in Section (*1).

(*1) General input information:

Permittee - permittee name.

Permit Number- LPDES permit number.

Appendix- Appendix designation for the header.

[] Flow Basis 1=proc, 0=all- if the flow basis for concentration limits is the same as the process flow in determining mass limits, then a "1" is placed in the designated cell. A "0" indicates the total outfall flow will be used in determining concentration based limits. See Concentration flow (MGD).

Concentration flow (MGD)- flow used for calculating concentration based limits in MGD.

GL vs Old, 0=n, 1=y, 2=GL+Old- this is the anti-backsliding (40 CFR 122.44.1, LAC 33.IX.2707.L) screening designation switch. "Old" represents the previous permit limit established by Best Professional Judgement (BPJ), which is now BAT for that facility, and "GL" represents the current guideline calculation. If the screen indicates that the previously established limitation is more stringent, but there has been an increase in production, another spreadsheet can be run giving guideline allowances for the production increase by putting a "2" in the specified cell. This cell sets a default for all anti-backsliding throughout the spreadsheet, but different options can be selected on a parameter specific basis.

Outfall number- Outfall number is placed in the designated cell, the default is "Out. 001", abbreviated due to space limitations in other portions of the spreadsheet.

Deepwell fract., 40 CFR 122.50/LAC 33:IX.2717- this applies to any situation where a discharger that falls under mass based guidelines or mass based BPJ and is discharging a portion of their wastewater to a surface water receiving stream and the remaining portion to a deepwell (most common in La.), POTW, offsite disposal, etc. The facility's mass based limitations must be reduced by the fraction of water not being discharged to the surface water receiving the discharge. Flow based guideline effluent limitations and associated BPJ will receive adjustments in their source flows.

(*2) OCPSF Flow Calculations- OCPSF flow calculations are divided into four basic categories, 1) process, 2) sanitary wastewater, 3) miscellaneous flows, and 4) utility wastewater. Additional flows may be entered as needed. Flows can either be entered as MGD or gpm units in the designated column. The process flow is used to calculate organic toxic limitations if the facility's annual production exceeds 5 million pounds per year of final product. Process flow includes flows generated by the manufacturing process, process area stormwater, and process lab water as stated in 40 CFR 414. Other flows, such as groundwater remediation wastewater, are considered as process wastewaters on a BPJ basis. Additional flows such as utility, sanitary, and miscellaneous

wastewaters are used in determining additional BPJ allocations for BOD_5 and TSS limitations, but not toxics. Miscellaneous wastewater includes, but is not limited to, wastewaters from tank farms or chemical storage areas or uncontaminated stormwater. Utility wastewater includes, but is not limited to, non-contact cooling tower blowdown, boiler blowdown, filter backwash, etc.

(*3) Fraction of OCPSF Conc. or BPJ []. Utility, Miscellaneous and other wastewaters contribute BOD_5 and TSS loadings to the process outfall if these wastewaters are discharged through the process outfall. For miscellaneous wastewaters, a BPJ determination has been made that these wastewaters receive 50% of the production weighted OCPSF concentrations for BOD_5 and TSS. For utility wastewaters, a BPJ determination has been made that these wastewaters receive 50% of the production weighted OCPSF concentrations for BOD_5 and TSS. Sanitary wastewaters shall receive BOD_5 and TSS allocations of 30 mg/L, average, and 45 mg/L, maximum, as treatment equivalent to secondary treatment (LAC 33.IX.711.D). Other wastewaters shall be approached on a case-by-case basis. Anti-backsliding concerns and/or a previous permit may preclude the usage of the weighted OCPSF concentrations described above. Different BOD_5 and TSS fractions or concentrations may be used as the situation dictates. If the previous permit contains other concentrations, they may be utilized instead of fractions of production weighted OCPSF concentrations.

(*4) Metal+CN Flow- The OCPSF guidelines specify that only a specific metal bearing wastestream shall receive allowances under the guideline (40 CFR 414.90, 414.100). However, through experience, it has been determined that there are several other potential sources of metals through out a facility other than from a catalyst in a metal bearing wastestream especially in an acidic wastestream. Examples of these sources include reaction vessels and equipment, piping, cooling towers, boilers, raw contaminants, etc. In consideration of these factors, the whole toxics process flow is utilized per BPJ in the calculation of metal limits unless anti-backsliding concerns (40 CFR 122.44.1, LAC 33.IX.2707.L) and/or a previous permit prescribe the use of a lesser flow. For situations where site-specific metal bearing flows (BPJ and OCPSF guideline) need to be calculated, the "Site-Specific Metal, Cyanide, and Total Residual Chlorine (TRC) Bearing Flows" table is used. Flow is entered in MGD or gpm under the specified column on the row(s) containing the metal(s) of concern.

(*5) OCPSF Guideline Subpart- BOD_5 and TSS mass limitations are calculated using a production weighted concentration. Organic chemical production figures in 1000/lbs day or production fractions of the total may be entered on the row(s) with the indicated subpart under the designated column. The production fraction will be used more frequently as many companies consider production information confidential. If a facility manufactures under only one subpart, then the production fraction shall be unity (1).

(*6) COD & TOC Ratios/COD, TOC, O&G []- Under the ratio section, it may be necessary to determine COD or TOC BPJ loadings based on BOD_5 limitations or loadings. The appropriate ratios are entered in the indicated cells. BPJ loadings for COD, TOC, and Oil and Grease (O&G) may also be determined on a concentration basis. Concentrations and flows are entered in the indicated cells. The ratios/concentrations are usually based on the previously issued permit, if one exists. If this is a new permit issuance or major modification involving a new unit, then the ratios/concentrations are usually based on similarly permitted facilities.

(*7) Inorganic Effluent Guidelines (40 CFR 415)- Inorganic guideline subpart and associated production and flow are entered as indicated. Chlor-Alkali guidelines (40 CFR 415.63) are present by default since chlor-alkali operations are most frequently associated with the production of organic chemicals (chlorinated solvents, vinyl chloride monomer, etc.). New sources are indicated by placing a "1" or a "0" in the indicated cell. O Fraction=0, []=1, indicates whether the BPJ BOD_5 allocation fraction is entered in terms of weighted OCPSF concentrations, indicated by a "0", or other concentration under the indicated columns, indicated by a "1". Production information is entered in terms of 1000 lbs per day. Flow is entered in MGD or gpm in the appropriate column. Other inorganic guideline input information is included on a case-by-case basis.

(*8) OCPSF Alternate Flows- On a case-by-case basis it may be necessary to utilize an alternate flow for the calculation of the conventional pollutants BOD_5 and TSS loadings or the calculation of the organic toxic loadings. This will most commonly occur in cases where a deepwell is being eliminated. Units are in MGD.

(*9) Page and Table numbering sequence- This section shall be used for all guideline calculations and combinations. The user can specify that the spreadsheet number the pages and tables in accordance with the guidelines/tables being used. Unused pages and tables are numbered "0". This section also controls the printing of the spreadsheet; non-numbered pages are not printed.

(*10) Precalculated COD and TOC limits- Occasionally it may be necessary to incorporate a precalculated technology-based limit for TOC or COD based on DMR's or other sources, such as a previously issued permit. These values are entered in the designated cells.

Table 2

Table 2 is a calculation table for the conventional pollutant loadings of BOD_5 and TSS utilizing guidelines and BPJ.

(*1) The top portion of the table lists OCPSF subparts under 40 CFR 414. The bottom portion indicated by "Other Sources/Guidelines" lists non-

guideline BPJ sources, sanitary wastewater, non-process area stormwater, miscellaneous wastewaters, utility wastewaters, under "Other Sources" and other contributing guidelines under "Other Guidelines".

(*2) Average BOD_5- Average BPT guideline concentrations in mg/L, lbs/1000 lbs of daily production, or BPJ concentrations in mg/L. Inorganic allocations are made by BPJ.

(*3) Maximum BOD_5- Maximum BPT guideline concentrations in mg/L, lbs/1000 lbs of daily production, or BPJ concentrations in mg/L. Inorganic allocations are made by BPJ.

(*4) Average TSS- Average BPT guideline concentrations in mg/L, lbs/1000 lbs of daily production, or BPJ concentrations in mg/L. Inorganic wastewater TSS limitations are calculated in accordance with 40 CFR 415, which are mass based effluent guidelines.

(*5) Maximum TSS- Maximum BPT guideline concentrations in mg/L, lbs/1000 lbs of daily production, or BPJ concentrations in mg/L. Inorganic wastewater TSS limitations are calculated in accordance with 40 CFR 415, which are mass based effluent guidelines.

(*6) Production in 1000 lbs/day- These values indicate the amount of production per subpart (OCPSF, Inorganic Guidelines; commonly Chlor-Alkali, and Pesticides).

(*7) At the top of the table, Production fraction of total. These values are based on a fraction of total OCPSF production per subpart. If all OCPSF manufacturing falls under one subpart, the fraction shall be unity (1).

At the bottom of the table, Flow to Treatment Plant Fraction. Applicable to mass-based guidelines; if a portion of a process wastewater is being injected to a deepwell, POTW, or other non-surface water source, this represents the remaining fraction being discharged to the receiving water.

(*8) Flow- For the OCPSF guideline portion of the table (the upper portion), this is the process flow calculated in Table 1. Under "BPJ Sources/Guidelines", these are the other categorical BPJ flows calculated in Table 1. Under the "Other Guideline" section, this is the flow associated with the production under that guideline part or subpart. Flows associated with mass-based guidelines are not used in calculations.

(*9) Conversion factor- used in conjunction with flow (MGD) for converting mg/L to lbs per day, 8.34 lbs/gallon. Mg/L is assumed to be equivalent to ppm.

(*10) BOD_5, Average, lbs/day- For OCPSF guideline allocations the concentration in column (*2) is multiplied by the production fraction in column (*7), the flow in column (*8), the conversion factor in column (*9) yielding a monthly average BOD_5 loading applicable to that subpart. BPJ Source allocations are determined similarly to the OCPSF guideline allocations. If mass-based guidelines are being considered under Other Guidelines", the guideline factor in column (*2) is multiplied by the production value in (*6), and the flow to treatment plant fraction in column (*7) if there is deepwell, POTW, or other disposal of process wastewater not to a surface water receiving stream. Inorganic wastewaters receive a BOD_5 allocation provided that anti-backsliding does not apply. The OCPSF guideline loadings are summed on the row with the label, "Total/Weighted[]." The BPJ Sources loadings including the OCPSF BPJ loadings are summed on the row labeled, "BPJ Source Total". Other Guideline contributions are summed on the line labeled "Other Guideline Total (lbs/day)". The grand total is on the indicated row and this is the technology limit for Monthly Average BOD_5.

(*11) BOD_5, Maximum, lbs/day- Similar to column (*10). See column (*10).

(*12) TSS, Average, lbs/day- For OCPSF guideline allocations the concentration in column (*4) is multiplied by the production fraction in column (*7), the flow in column (*8), the conversion factor in column (*9) yielding a monthly average BOD_5 loading applicable to that subpart. BPJ Source allocations are determined similarly to the OCPSF guideline allocations. If mass-based guidelines are being considered under Other Guidelines", the guideline factor in column (*4) is multiplied by the production value in (*6), and the flow to treatment plant fraction in column (*7) if there is deepwell, POTW, or other disposal of process wastewater not to a surface water receiving stream. The OCPSF guideline loadings are summed on the row with the label, "Total/Weighted[]." The BPJ Sources loadings including the OCPSF BPJ loadings are summed on the row labeled, "BPJ Source Total". Other Guideline contributions are summed on the line labeled "Other Guideline Total (lbs/day)". The grand total is on the indicated row and this is the technology limit for Monthly Average TSS.

(*13) TSS, Maximum, lbs/day- Similar to column (*12). See column (*12).

Table 3

Table 3 includes calculations for the heavy metals, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Zinc, Total Cyanide, Total Mercury, Total Residual Chlorine (TRC), Amenable Cyanide, and Fluoride utilizing BAT, NSPS, or BPJ as indicated.

(*1) Subcategory and/or Source- This specifies the applicable guideline subpart, subcategory, or BPJ source. When site-specific OCPSF metal limits are being calculated, the categorical source will be displayed:

process wastewater, miscellaneous and utility wastewater, and non-ocpsf wastewater.

(*2) Average (parameter) guideline factor (lbs/1000 lbs daily production), or BPJ concentration (mg/L). Parameter is the indicated metal, cyanide, or TRC. BPJ concentrations for TRC are usually 0.9 mg/L, average, from the Inorganic Chemicals Development Document (Phase I) pg. 183, EPA 440/1-82/007, associated with chlor-alkali production.

(*3) Maximum (parameter) guideline factor (lbs/1000 lbs daily production), BPJ concentration (mg/L). Parameter is the indicated metal, cyanide, or TRC. BPJ concentrations for TRC are usually 1.5 mg/L, maximum, from the Inorganic Chemicals Development Document (Phase I) pg. 183, EPA 440/1-82/007, associated with chlor-alkali production.

(*4) Same as (*2).

(*5) Same as (*3).

(*6) Production in 1000 lbs/day- Applicable to mass based effluent guidelines, these values indicate the amount of production in 1000 lbs/day.

(*7) Flow to Treatment Plant Fraction- If a facility with mass-based guidelines is discharging a portion of their wastewater to a deepwell, POTW, or other source that is not the receiving water(s), the remaining fraction discharged to the surface receiving water(s) is placed in this column for mass-based limit calculation.

(*8) Parameter flow in MGD- This flow is associated with the parameter specified in columns (*2) and (*3) and is used in determining flow based loadings.

(*9) Parameter flow in MGD- This flow is associated with the parameter specified in columns (*4) and (*5) and is used in determining flow based loadings.

(*10) Average guideline subcategory/subpart or source quantity allowance in lbs/day for specified parameter. For concentration-based guidelines/BPJ, this is determined by multiplying the concentration specified in column (*2) times the flow specified in column (*8) times the conversion factor 8.34. For mass-based guidelines the guideline process factor in column (*2) is multiplied times the daily production value specified in column (*6) and the flow to treatment plant fraction in column (*7) if process wastewater is being discharged to a deepwell, POTW, or other non-surface water means.

(*11) Maximum guideline subcategory/subpart or source quantity allowance in lbs/day for specified parameter. For concentration-based guidelines/BPJ, this is determined by multiplying the concentration

specified in column (*3) times the flow specified in column (*8) times the conversion factor 8.34. For mass-based guidelines the guideline process factor in column (*3) is multiplied times the daily production value specified in column (*6) and the flow to treatment plant fraction in column (*7) if process wastewater is being discharged to a deepwell, POTW, or other non-surface water means.

(*12) Similar to column (*10). See description for (*10).

(*13) Similar to column (*11). See description for (*11).

Site-Specific Metal, Total Residual Chlorine (TRC), and Cyanide Bearing Flow Allocation. For the metals and cyanide regulated under the OCPSF guidelines, three categories of sources are accounted for, 1) OCPSF process wastewater, 2) miscellaneous and utility wastewaters, and 3) non-OCPSF guideline wastewater. TRC allocation flows are indicated by the specific source.

(*14) Parameter/Source- Metal, Cyanide, or TRC receiving a flow allocation and the source of the flow categorized as an 1) OCPSF process wastewater, 2) miscellaneous and utility wastewater, and 3) non-OCPSF wastewater. These categories may differ as the situation dictates, i.e., TRC.

(*15) Flow, MGD- Source flow in MGD.

Table 4

Table 4 is a calculation summary table for Conventional, Non-Conventional, and Toxic limits. If there is one consolidated OCPSF metal bearing waste stream per metal and this is the only metal source, then the guideline concentrations in columns (*2) (Daily Average) and (*3) (Daily Maximum) are multiplied times the flow in column (*4) times the conversion factor of 8.34 to yield daily average and daily maximum guideline loadings in lbs/day in columns (*5) and (*6), respectively.

(*1) Parameter- The parameters are organized into three groups, Conventional, Non-Conventional, and Metals and Cyanide.

(*2) Average guideline/BPJ value- Guideline or BPJ value in terms of concentration, mg/L. If there are multiple sources/allocations for the listed metals/cyanide, these values will not be indicated in this column. Single or consolidated metal/cyanide bearing waste streams (OCPSF only) will have values indicated in this column. Values will not be indicated for the conventional and non-conventional pollutants listed.

(*3) Maximum guideline/BPJ value- Guideline or BPJ value in terms of concentration, mg/L. If there are multiple sources/allocations for the listed metals/cyanide, these values will not be indicated in this column. Single or consolidated metal/cyanide bearing waste streams

(OCPSF only) will have values indicated in this column. Values will not be indicated for the conventional and non-conventional pollutants listed.

(*4) Process flow in MGD- Similar to columns (*2) and (*3), this column will be left blank unless there is one consolidated metal/cyanide bearing waste stream.

(*5) Average Guideline/BPJ effluent limitation in lbs/day. Except for the metal/cyanide situation discussed in column (*2), these values are calculated in other tables and summarized in this column.

(*6) Maximum Guideline/BPJ effluent limitation in lbs/day. Similar to column (*5).

(*7) Average Tech Old in lbs/day- This column is utilized when an anti-backsliding concern (CWA 402(o), 40 CFR 122.44.1, LAC 33.IX.2707.L) is present. This would be indicated by significantly higher limits (=10% or greater) calculated under guidelines than those previously established in the previous permit on a BPJ basis (now achievable technology, if the permittee is meeting the limits) before guideline issuance. If the previously issued permit (as applicable) contains limits for the parameter of concern and an anti-backsliding concern is present, the limits from the previously issued permit are placed in this column in lbs/day.

(*8) Maximum Tech Old in lbs/day- Similar to (*7).

(*9) Antiback, 0=no scr., 1=OldvsGL, 2=Old+GL- Anti-Backsliding screening switch. The default is set under section (*1) in Table 1. If a screen is conducted, a "1" will appear in this column. The more stringent permit limits will appear in columns (*10) and (*11). If the screen indicates that the previously issued permit limit utilizing BPJ-Technology is more stringent and an increase in production has occurred, the technology based limits can be recalculated by running the spreadsheet a second time using guidelines for the increase only. This will be indicated by a "2" in this column. The recalculated guideline limitations in columns (*4) and (*5) are subsequently added to the values in columns (*7) and (*8) yielding technology-based effluent limitations in columns (*10) and (*11). The values in this column can be changed on a row-by-row basis for site-specific screening situations.

(*10) Average technology based effluent limit in lbs/day- If no anti-backsliding screening is conducted then the value in this column will be equal to the value in column (*5). When anti-backsliding screening is used, see discussion for column (*9).

(*11) Maximum technology based effluent limit in lbs/day- If no anti-backsliding screening is conducted then the value in this column will be

equal to the value in column (*6). When anti-backsliding screening is used, see discussion for column (*9).

(*12) Average technology based effluent limit in mg/L- A concentration limit can be calculated using the specified concentration flow from section (*1) in Table 1 and the mass limitation calculated under column (*10). The formula is as follows:

$$\frac{\text{effluent limit, lbs/day}}{\text{flow, MGD} * 8.34}$$

(*13) Maximum technology based effluent limit in mg/L- Similar to column (*11), a concentration limit can be calculated using the specified concentration flow from section (*1) in Table 1 and the mass limitation calculated under column (*11). The formula is as follows:

$$\frac{\text{effluent limit, lbs/day}}{\text{flow, MGD} * 8.34}$$

Table 5

Table 5 calculates the organic toxic technology effluent limitations based on BAT/NSPS established in the OCPSF guidelines, Subpart I or J as indicated. The column designations are very similar to those used for the summary table for Conventional pollutants, Non-Conventional pollutants, and Metals and Cyanide.

(*1) Parameter. The parameters are organized into three groups, Volatile Compounds, Acid Compounds, and Base/Neutral Compounds.

(*2) Average guideline value (BAT/NSPS) in terms of concentration in mg/L.

(*3) Maximum guideline value (BAT/NSPS) in terms of concentration in mg/L.

(*4) OCPSF process flow in MGD.

(*5) Average guideline limit in lbs/day- Calculated by multiplying the guideline concentration in column (*2) times the flow in column (*4) times the conversion factor of 8.34.

(*6) Maximum guideline limit in lbs/day- Calculated by multiplying the guideline concentration in column (*3) times the flow in column (*4) times the conversion factor of 8.34. Similar to column (*5).

(*7) Average Tech Old in lbs/day- This column is utilized when an anti-backsliding concern (CWA 402(o), 40 CFR 122.44.1, LAC 33.IX.2707.L) is present. This would be indicated by significantly higher limits (=10% or greater) calculated under guidelines than those previously established in the previous permit on a BPJ basis (now achievable technology, if the permittee is meeting the limits) before guideline issuance. If the previously issued permit (as applicable) contains limits for the parameter of concern and an anti-backsliding concern is

present, the limits from the previously issued permit are placed in this column in lbs/day.

(*8) Maximum Tech Old in lbs/day- Similar to (*7).

(*9) Antiback, 0=no scr., 1=OldvsGL, 2=Old+GL- Anti-Backsliding screening switch. The default is set under section (*1) in Table 1. If a screen is conducted, a "1" will appear in this column. The more stringent permit limits will appear in columns (*10) and (*11). If the screen indicates that the previously issued permit limit utilizing BPJ-Technology is more stringent and an increase in production has occurred, the technology based limits can be recalculated by running the spreadsheet a second time using guidelines for the increase only. This will be indicated by a "2" in this column. The recalculated guideline limitations in columns (*4) and (*5) are subsequently added to the values in columns (*7) and (*8) yielding technology-based effluent limitations in columns (*10) and (*11). The values in this column can be changed on a row-by-row basis for site-specific screening situations.

(*10) Average technology based effluent limit in lbs/day- If no anti-backsliding screening is conducted then the value in this column will be equal to the value in column (*5). When anti-backsliding screening is used, see discussion for column (*9).

(*11) Maximum technology based effluent limit in lbs/day- If no anti-backsliding screening is conducted then the value in this column will be equal to the value in column (*6). When anti-backsliding screening is used, see discussion for column (*9).

(*12) Daily Average technology based effluent limit in mg/L- A concentration limit can be calculated using the specified concentration flow from section (*1) in Table 1 and the mass limitation calculated under column (*10). The formula is as follows:

$$\frac{\text{effluent limit, lbs/day}}{\text{flow, MGD} * 8.34}$$

(*13) Daily Maximum technology based effluent limit in mg/L- Similar to column (*11), a concentration limit can be calculated using the specified concentration flow from section (*1) in Table 1 and the mass limitation calculated under column (*11). The formula is as follows:

$$\frac{\text{effluent limit, lbs/day}}{\text{flow, MGD} * 8.34}$$

Appendix B

wqsadd.wk4 Date: 01/15 Appendix B-1 Page 1
Developer: Bruce Fielding Time: 10:55 AM Honeywell International, Inc., Baton Rouge Plant
Software: Lotus 4.0 LA0000329, AI289
Revision date: 03/02/01

Total Loading for Outfalls 001 and 003

Input variables:

Permittee	Honeywell International, Inc., Baton Rouge Plant
Permit Number=	LA0000329, AI289

Outfalls to be summed: Outfall#:Flow, MGD:

Outfall	001	1.05
Outfall	003	1.721
Outfall	N/A	
Total		2.771
Outfall list	001 and 003	

Page Numbering/Labeling

Appendix	Appendix B-1
Page Numbers 1=y, 0=n	1
Input Page # 1=y, 0=n	1

Documentation:

This is a simple spreadsheet used for summing the total loadings from up to three outfalls for the purpose of water quality screening. Technology limits and/or end-of-pipe measurements are added for a total facility loading. Calculation columns are indicated with an asterisk and number enclosed by paretheses. For example, (*1) or (*9). The term "N/A" will appear in column headers if there are less than 3 outfalls being summed.

Explanation of column calculations:

(*1) Parameter being screened
(*2) Monthly average technology or effluent value in mass units of lbs/day.
(*3) Daily maximum technology or effluent value in mass units of lbs/day.
(*4) Similar to column (*2). See explanation for column (*2).
(*5) Similar to column (*3). See explanation for column (*3).
(*6) Similar to column (*2). See explanation for column (*2).
(*7) Similar to column (*3). See explanation for column (*3).
(*8) Sum of daily averages in columns (*2), (*4), and (*6).
(*9) Sum of daily maximums in columns (*3), (*5), and (*7).

Appendix B-1

Total Loading for Outfalls 001 and 003

LA0000329, AI289

(*1) Toxic Parameters	(*2) Outfall 001 (Avg) lbs/day	(*3) Outfall 001 (Max) lbs/day	(*4) Outfall 003 (Avg) lbs/day	(*5) Outfall 003 (Max) lbs/day	(*6) Outfall N/A (Avg) lbs/day	(*7) Outfall N/A (Max) lbs/day	(*8) Total Loading (Avg) lbs/day	(*9) Total Loading (Max) lbs/day
NONCONVENTIONAL								
Total Phenols (4AAP)	0.038		0.111				0.149	---
3-Chlorophenol							---	---
4-Chlorophenol							---	---
2,3-Dichlorophenol							---	---
2,5-Dichlorophenol							---	---
2,6-Dichlorophenol							---	---
3,4-Dichlorophenol							---	---
2,4-Dichlorophenocy-acetic acid (2,4-D)							---	---
2-(2,4,5-Trichlorophen-oxy) propionic acid (2,4,5-TP, Silvex)							---	---
METALS AND CYANIDE								
Total Arsenic							---	---
Total Cadmium	0.126		0.195				0.321	---
Chromium III	4.579636	11.42846	0.39				4.969636	11.428460
Chromium VI	4.579636	11.42846	0.39				4.969636	11.428460
Total Copper	5.982407	13.9452	0.39				6.372407	13.945200
Total Lead	1.320255	2.846801	0.195				1.515255	2.846801
Total Mercury							---	---
Total Nickel	6.972599	16.42068	1.56				8.532599	16.420680
Total Zinc	4.332088	10.76833	14.02				18.35209	10.768330
Total Cyanide	1.732835	4.950958					1.732835	4.950958
DIOXIN								
2,3,7,8 TCDD; dioxin							---	---
VOLATILE COMPOUNDS								
Benzene	0.23517	0.552857					0.23517	0.552857
Bromoform	0.585863	1.567803					0.585863	1.567803
Bromodichloromethane							---	---
Carbon Tetrachloride	0.585863	1.567803					0.585863	1.567803
Chloroform	4.57964	1.340884					4.57964	1.340884
Dibromochloromethane							---	---
1,2-Dichloroethane (EDC)	0.742644	2.368208					0.742644	2.368208
1,1-Dichloroethylene	0.090768	0.247548					0.090768	0.247548
1,3-Dichloropropylene	0.808656	3.275884					0.808656	3.275884
Ethylbenzene	0.585863	1.567803					0.585863	1.567803
Methyl Chloride	0.453838	1.21711					0.453838	1.217110
Methylene Chloride	0.148529	0.701386					0.148529	0.701386
1,1,2,2-Tetrachloro-ethane							---	---

Appendix B-1

Total Loading for Outfalls 001 and 003

LA0000329, AI289

(*1) Toxic Parameters	(*2) Outfall 001 (Avg) lbs/day	(*3) Outfall 001 (Max) lbs/day	(*4) Outfall 003 (Avg) lbs/day	(*5) Outfall 003 (Max) lbs/day	(*6) Outfall N/A (Avg) lbs/day	(*7) Outfall N/A (Max) lbs/day	(*8) Total Loading (Avg) lbs/day	(*9) Total Loading (Max) lbs/day
VOLATILE COMPOUNDS (cont'd)								
Tetrachloroethylene	0.214541	0.676631					0.214541	0.676631
Toluene	0.115522	0.305309					0.115522	0.305309
1,1,1-Trichloroethane	0.090768	0.243422					0.090768	0.243422
1,1,2-Trichloroethane	0.132026	0.523976					0.132026	0.523976
Trichloroethylene	0.107271	0.28468					0.107271	0.284680
Vinyl Chloride	0.400202	0.709637					0.400202	0.709637
ACID COMPOUNDS								
2-Chlorophenol							---	---
2,4-Dichlorophenol							---	---
BASE NEUTRAL COMPOUNDS								
Benzidine							---	---
Hexachlorobenzene	0.808656	3.275884					0.808656	3.275884
Hexachlorabutadiene	0.585863	1.567803					0.585863	1.567803
PESTICIDES								
Aldrin							---	---
Hexachlorocyclohexane (gamma BHC, Lindane)							---	---
Chlordane							---	---
4,4'-DDT							---	---
4,4'-DDE							---	---
4,4'-DDD							---	---
Dieldrin							---	---
Endosulfan							---	---
Endrin							---	---
Heptachlor							---	---

Toxaphene							---	---
Other Parameters:								
Fecal Colif. (col/100ml)							---	---
Chlorine							---	---
Ammonia							---	---
Chlorides							---	---
Sulfates							---	---
TDS							---	---
Goldbook Values:								
							---	---
							---	---
							---	---

wqsmodn.wk4 Date: 01/15 Appendix B-2 Page 1
Developer: Bruce Fielding Time: 10:58 AM
Software: Lotus 4.0 LA000329, AI289
Revision date: 3/11/09

Water Quality Screen for Honeywell International Inc., Baton Rouge Plant

Input variables:

Receiving Water Characteristics:

Receiving Water Name=	Mississippi River
Critical flow (Qr) cfs=	141955
Harm. mean/avg tidal cfs=	366748
Drinking Water=1 HHNPCR=2	1
MW=1, BW=2, 0=n	
Rec. Water Hardness=	154
Rec. Water TSS=	53
Fisch/Specific=1,Stream=0	
Diffuser Ratio=	

Effluent Characteristics:

Permittee=	Honeywell International Inc., Baton Rouge Plant
Permit Number=	LA000329, AI289
Facility flow (Qef),MGD=	2.771
Outfall Number =	001&003
Eff. data, 2=lbs/day	2
MQL, 2=lbs/day	1
Effluent Hardness=	N/A
Effluent TSS=	N/A
WQBL ind. 0=y, 1=n	
Acute/Chr. ratio 0=n, 1=y	1
Aquatic,acute only1=y,0=n	

Page Numbering/Labeling

Appendix	Appendix B-2
Page Numbers 1=y, 0=n	1
Input Page # 1=y, 0=n	1

Fischer/Site Specific inputs:

Pipe=1,Canal=2,Specific=3	
Pipe width, feet	
ZID plume dist., feet	
MZ plume dist., feet	
HHnc plume dist., feet	
HHc plume dist., feet	

Fischer/site specific dilutions:

F/specific ZID Dilution =	---
F/specific MZ Dilution =	---
F/specific HHnc Dilution=	---
F/specific HHc Dilution=	---

Dilution:

ZID Fs =	0.033333
MZ Fs =	0.333333
Critical Qr (MGD)=	91745.52
Harm. Mean (MGD)=	237029.2
ZID Dilution =	0.000905
MZ Dilution =	0.000091
HHnc Dilution=	0.00003
HHc Dilution=	0.000012
ZID Upstream =	1103.639
MZ Upstream =	11036.39
MZhhnc Upstream=	33109.17
MZhhc Upstream=	85539.24
ZID Hardness=	---
MZ Hardness=	---
ZID TSS=	---
MZ TSS=	---

Multipliers:

WLAa --> LTAa	0.32
WLAc --> LTAc	0.53
LTA a,c-->WQBL avg	1.31
LTA a,c-->WQBL max	3.11
LTA h --> WQBL max	2.38
WQBL-limit/report	2.13
WLA Fraction	1
WQBL Fraction	1

Conversions:

ug/L-->lbs/day Qef	0.02311
ug/L-->lbs/day Qeo	0
ug/L-->lbs/day Qr	1183.905
lbs/day-->ug/L Qeo	43.27105
lbs/day-->ug/L Qef	43.27105
diss-->tot 1=y0=n	1
Cu diss->tot1=y0=n	1
cfs-->MGD	0.6463

Receiving Stream:

Default Hardness=	25
Default TSS=	10
99 Crit., 1=y, 0=n	1
Old MQL=1, New=0	1

Toxicity Dilution Series:

Biomonitoring dilution:	0.000906
Dilution Series Factor:	0.75

	Percent Effluent
Dilution No. 1	0.121%
Dilution No. 2	0.0906%
Dilution No. 3	0.0680%
Dilution No. 4	0.0510%
Dilution No. 5	0.0382%

Partition Coefficients; Dissolved-->Total

METALS	FW
Total Arsenic	2.402154
Total Cadmium	3.387284
Chromium III	5.436481
Chromium VI	1
Total Copper	3.919746
Total Lead	7.194599
Total Mercury	2.66341
Total Nickel	3.701685
Total Zinc	5.113323

Aquatic Life, Dissolved Metal Criteria, ug/L

METALS	ACUTE	CHRONIC
Arsenic	339.8	150
Cadmium	50.77136	1.418404
Chromium III	781.5281	253.5196
Chromium VI	15.712	10.582
Copper	27.67681	17.76542
Lead	102.9974	4.013662
Mercury	1.734	0.012
Nickel	2039.5	226.5028
Zinc	165.0031	150.6729

Site Specific Multiplier Values:

CV =	---
N =	---
WLAa --> LTAa	---
WLAc --> LTAc	---
LTA a,c-->WQBL avg	---
LTA a,c-->WQBL max	---
LTA h --> WQBL max	---

Appendix B-2
Honeywell International Inc., Baton Rouge Plant
LA000329, AI289

(*1) Toxic Parameters	(*2) Instream Conc. ug/L	(*3) CuEffluent /Tech (Avg) lbs/day	(*4) Effluent /Tech (Max) lbs/day	(*5) MQL ug/L	(*6) 1=No 0=95 %	(*7) Effluent 95th % estimate Non-Tech lbs/day	(*8) Numerical Criteria Acute FW ug/L	(*9) Chronic FW ug/L	(*10) HHDW ug/L	(*11) HH Carcinogen Indicator "C"
NONCONVENTIONAL										
Total Phenols (4AAP)		0.149		5	0	0.31737	700	350	5	
3-Chlorophenol				10					0.1	
4-Chlorophenol				10			383	192	0.1	
2,3-Dichlorophenol				10					0.04	
2,5-Dichlorophenol				10					0.5	
2,6-Dichlorophenol				10					0.2	
3,4-Dichlorophenol				10					0.3	
2,4-Dichlorophenocy-acetic acid (2,4-D)				---					100	
2-(2,4,5-Trichlorophen-oxy) propionic acid (2,4,5-TP, Silvex)				---					10	
METALS AND CYANIDE										
Total Arsenic				10			816.2519	360.3231	120.1077	
Total Cadmium		0.321		1	0	0.68373	171.977	4.804538	33.87284	
Chromium III		4.969636	11.42846	10	1		4248.762	1378.255	271.824	
Chromium VI		4.969636	11.42846	10	1		15.712	10.582	50	C
Total Copper		6.372407	13.9452	10	1		108.486	69.63594	3919.746	
Total Lead		1.515255	2.846801	5	1		741.0252	28.87669	359.73	
Total Mercury				0.2			4.618353	0.031961	5.326821	
Total Nickel		8.532599	16.42068	40	1		7549.586	838.4421		
Total Zinc		18.35209	10.76833	20	1		843.7141	770.439	25566.61	
Total Cyanide		1.732835	4.950958	20	1		45.9	5.4	663.8	
DIOXIN										
2,3,7,8 TCDD; dioxin				0.00001					7.1E-007	C
VOLATILE COMPOUNDS										
Benzene		0.23517	0.552857	10	1		2249	1125	1.1	C
Bromoform		0.585863	1.567803	10	1		2930	1465	3.9	C
Bromodichloromethane				10					0.2	C
Carbon Tetrachloride		0.585863	1.567803	10	1		2730	1365	0.22	C
Chloroform		4.57964	1.340884	10	1		2890	1445	5.3	C
Dibromochloromethane				10					0.39	C
1,2-Dichloroethane		0.742644	2.368208	10	1		11800	5900	0.36	C
1,1-Dichloroethylene		0.090768	0.247548	10	1		1160	580	0.05	C
1,3-Dichloropropylene		0.808656	3.275884	10	1		606	303	9.86	
Ethylbenzene		0.585863	1.567803	10	1		3200	1600	2390	
Methyl Chloride		0.453838	1.21711	50	1		55000	27500		
Methylene Chloride		0.148529	0.701386	20	1		19300	9650	4.4	C
1,1,2,2-Tetrachloro-ethane				10			932	466	0.16	C

(*1) Toxic Parameters	(*12) WLAa Acute	(*13) WLAc Chronic	(*14) WLAh HHDW	(*15) LTAa Acute	(*16) LTAc Chronic	(*17) LTAh HHDW	(*18) Limiting A,C,HH	(*19) WQBL Avg 001&	(*20) WQBL Max 001&	(*21) WQBL Avg 001&	(*22) WQBL Max 001&003	(*23) Need WQBL?
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	lbs/day	lbs/day	
NONCONVENTIONAL												
Total Phenols (4AAP)	773247.4	3863087	165550.9	247439.2	2047436	165550.9	165550.9	165550.9	394011.1	3825.904	9105.651	no
3-Chlorophenol	---	---	3311.017	---	---	3311.017	3311.017	3311.017	7880.221	76.51807	182.113	no
4-Chlorophenol	423076.8	2119179	3311.017	135384.6	1123165	3311.017	3311.017	3311.017	7880.221	76.51807	182.113	no
2,3-Dichlorophenol	---	---	1324.407	---	---	1324.407	1324.407	1324.407	3152.088	30.60723	72.8452	no
2,5-Dichlorophenol	---	---	16555.09	---	---	16555.09	16555.09	16555.09	39401.11	382.5904	910.5651	no
2,6-Dichlorophenol	---	---	6622.034	---	---	6622.034	6622.034	6622.034	15760.44	153.0361	364.226	no
3,4-Dichlorophenol	---	---	9933.052	---	---	9933.052	9933.052	9933.052	23640.66	229.5542	546.339	no
2,4-Dichlorophenocy-acetic acid (2,4-D)	---	---	3311017	---	---	3311017	3311017	3311017	7880221	76518.07	182113	no
2-(2,4,5-Trichlorophen-oxy) propionic acid (2,4,5-TP, Silvex)	---	---	331101.7	---	---	331101.7	331101.7	331101.7	788022.1	7651.807	18211.3	no
METALS AND CYANIDE												
Total Arsenic	901663.8	3977027	3976787	288532.4	2107824	3976787	288532.4	377977.5	897335.8	8735.112	20737.56	no
Total Cadmium	189972.5	53029.57	1121536	60791.21	28105.67	1121536	28105.67	36818.43	87408.64	850.879	2020.026	no
Chromium III	4693349	1.5E+007	9000140	1501872	8062537	9000140	1501872	1967452	4670821	45468.09	107943.3	no
Chromium VI	17356.09	116797.7	4277012	5553.949	61902.76	4277012	5553.949	7275.673	17272.78	168.1418	399.1764	no
Total Copper	119837.9	768599.1	1.3E+008	38348.14	407357.5	1.3E+008	38348.14	50236.06	119262.7	1160.962	2756.178	no
Total Lead	818565.3	318723.3	1.2E+007	261940.9	168923.3	1.2E+007	168923.3	221289.6	525351.6	5114.033	12140.95	no
Total Mercury	5101.614	352.7652	176371.9	1632.516	186.9656	176371.9	186.9656	244.9249	581.4629	5.660248	13.43769	no
Total Nickel	8339568	9254213	---	2668662	4904733	---	2668662	3495947	8299538	80791.82	191803.5	no
Total Zinc	931999.6	8503636	8.5E+008	298239.9	4506927	8.5E+008	298239.9	390694.2	927526	9028.999	21435.26	no
Total Cyanide	50702.93	59601.91	2.2E+007	16224.94	31589.01	2.2E+007	16224.94	21254.67	50459.56	491.1984	1166.127	no
DIOXIN												
2,3,7,8 TCDD; dioxin	---	---	0.060734	---	---	0.060734	0.060734	0.060734	0.144546	0.001404	0.00334	no
VOLATILE COMPOUNDS												
Benzene	2484333	1.2E+007	94094.26	794986.7	6581044	94094.26	94094.26	94094.26	223944.3	2174.532	5175.385	no
Bromoform	3236592	1.6E+007	333606.9	1035710	8569982	333606.9	333606.9	333606.9	793984.5	7709.703	18349.09	no
Bromodichloromethane	---	---	17108.05	---	---	17108.05	17108.05	17108.05	40717.15	395.3694	940.9791	no
Carbon Tetrachloride	3015665	1.5E+007	18818.85	965012.7	7985000	18818.85	18818.85	18818.85	44788.87	434.9063	1035.077	no
Chloroform	3192407	1.6E+007	453363.3	1021570	8452986	453363.3	453363.3	453363.3	1079005	10477.29	24935.95	no
Dibromochloromethane	---	---	33360.69	---	---	33360.69	33360.69	33360.69	79398.45	770.9703	1834.909	no
1,2-Dichloroethane	1.3E+007	6.5E+007	30794.49	4171117	3.5E+007	30794.49	30794.49	30794.49	73290.88	711.6649	1693.762	no
1,1-Dichloroethylene	1281381	6401687	4277.012	410042	3392894	4277.012	4277.012	4277.012	10179.29	98.84235	235.2448	no
1,3-Dichloropropylene	669411.3	3344329	326466.3	214211.6	1772495	326466.3	214211.6	280617.2	666198.1	6485.103	15395.93	no
Ethylbenzene	3534845	1.8E+007	7.9E+007	1131150	9359707	7.9E+007	1131150	1481807	3517878	34244.77	81298.65	no
Methyl Chloride	6.1E+007	3E+008	---	1.9E+007	1.6E+008	---	1.9E+007	2.5E+007	6E+007	588582	1397321	no
Methylene Chloride	2.1E+007	1.1E+008	376377.1	6822251	5.6E+007	376377.1	376377.1	376377.1	895777.4	8698.126	20701.54	no
1,1,2,2-Tetrachloro-ethane	1029524	5143424	13686.44	329447.6	2726015	13686.44	13686.44	13686.44	32573.72	316.2955	752.7833	no

Appendix B-2
Honeywell International Inc., Baton Rouge Plant
LA000329, AI289

(*1) Toxic Parameters	(*2) Instream Conc. ug/L	(*3) CuEffluent /Tech (Avg) lbs/day	(*4) Effluent /Tech (Max) lbs/day	(*5) MQL ug/L	(*6) Effluent 95th % 1=No 95% 0=95 %	(*7) estimate Non-Tech lbs/day	(*8) Numerical Criteria Acute FW ug/L	(*9) Chronic FW ug/L	(*10) HHDW ug/L	(*11) HH Carcinogen Indicator "C"
VOLATILE COMPOUNDS (cont'd)										
Tetrachloroethylene		0.214541	0.676631	10	1		1290	645	0.65	C
Toluene		0.115522	0.305309	10	1		1270	635	6100	
1,1,1-Trichloroethane		0.090768	0.243422	10	1		5280	2640	200	
1,1,2-Trichloroethane		0.132026	0.523976	10	1		1800	900	0.56	C
Trichloroethylene		0.107271	0.28468	10	1		3900	1950	2.8	C
Vinyl Chloride		0.400202	0.709637	10	1				1.9	C
ACID COMPOUNDS										
2-Chlorophenol				10			258	129	0.1	
2,4-Dichlorophenol				10			202	101	0.3	
BASE NEUTRAL COMPOUNDS										
Benzidine				50			250	125	0.00008	C
Hexachlorobenzene		0.808656	3.275884	10	1				0.00025	C
Hexachlorabutadiene		0.585863	1.567803	10	1		5.1	1.02	0.09	C
PESTICIDES										
Aldrin				0.05			3		0.00004	C
Hexachlorocyclohexane (gamma BHC, Lindane)				0.05			5.3	0.21	0.11	C
Chlordane				0.2			2.4	0.0043	0.00019	C
4,4'-DDT				0.1			1.1	0.001	0.00019	C
4,4'-DDE				0.1			52.5	10.5	0.00019	C
4,4'-DDD				0.1			0.03	0.006	0.00027	C
Dieldrin				0.1			0.2374	0.0557	0.00005	C
Endosulfan				0.1			0.22	0.056	0.47	
Endrin				0.1			0.0864	0.0375	0.26	
Heptachlor				0.05			0.52	0.0038	0.00007	C
				1			2	0.014		
Toxaphene				5			0.73	0.0002	0.00024	C
Other Parameters:										
Fecal Col.(col/100ml)										
Chlorine							19	11		
Ammonia										
Chlorides										
Sulfates										
TDS										

(*1) Toxic Parameters	(*12) WLAa Acute	(*13) WLAc Chronic	(*14) WLAh HHDW	(*15) LTAa Acute	(*16) LTAc Chronic	(*17) LTAh HHDW	(*18) Limiting A,C,HH	(*19) WQBL Avg 001&	(*20) WQBL Max 001&	(*21) WQBL Avg 001&	(*22) (*23) WQBL Need MaxWQBL? 001&003
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	lbs/day	lbs/day
Tetrachloroethylene	1424984	7119117	55601.16	455995	3773132	55601.16	55601.16	55601.16	132330.8	1284.95	3058.182 no
Toluene	1402892	7008743	2E+008	448925.3	3714634	2E+008	448925.3	588092.2	1396158	13590.89	32265.4 no
1,1,1-Trichloroethane	5832494	2.9E+007	6622034	1866398	1.5E+007	6622034	1866398	2444982	5804498	56503.87	134142.8 no
1,1,2-Trichloroethane	1988350	9933652	47902.53	636272.1	5264835	47902.53	47902.53	47902.53	114008	1107.034	2634.742 no
Trichloroethylene	4308092	2.2E+007	239512.7	1378590	1.1E+007	239512.7	239512.7	239512.7	570040.2	5535.171	13173.71 no
Vinyl Chloride	---	---	162526.5	---	---	162526.5	162526.5	162526.5	386813	3756.009	8939.302 no
ACID COMPOUNDS											
2-Chlorophenol	284996.9	1423823	3311.017	91199	754626.4	3311.017	3311.017	3311.017	7880.221	76.51807	182.113 no
2,4-Dichlorophenol	223137.1	1114776	9933.052	71403.87	590831.5	9933.052	9933.052	9933.052	23640.66	229.5542	546.339 no
BASE NEUTRAL COMPOUNDS											
Benzidine	276159.8	1379674	6.843219	88371.13	731227.1	6.843219	6.843219	6.843219	16.28686	0.158148	0.376392 no
Hexachlorobenzene	---	---	21.38506	---	---	21.38506	21.38506	21.38506	50.89644	0.494212	1.176224 yes
Hexachlorabutadiene	5633.659	11258.14	7698.622	1802.771	5966.813	7698.622	1802.771	2361.63	5606.618	54.5776	129.5697 no
PESTICIDES											
Aldrin	3313.917	---	3.42161	1060.454	---	3.42161	3.42161	3.42161	8.143431	0.079074	0.188196 no
Hexachlorocyclohexane (gamma BHC, Lindane)	5854.587	2317.852	9409.426	1873.468	1228.462	9409.426	1228.462	1609.285	3820.516	37.19079	88.29265 no
Chlordane	2651.134	47.46078	16.25265	848.3628	25.15421	16.25265	16.25265	16.25265	38.6813	0.375601	0.89393 no
4,4'-DDT	1215.103	11.03739	16.25265	388.833	5.849817	16.25265	5.849817	7.66326	18.19293	0.177099	0.420441 no
4,4'-DDE	57993.55	115892.6	16.25265	18557.94	61423.08	16.25265	16.25265	16.25265	38.6813	0.375601	0.89393 no
4,4'-DDD	33.13917	66.22434	23.09586	10.60454	35.0989	23.09586	10.60454	13.89194	32.9801	0.321045	0.762175 no
Dieldrin	262.2413	614.7827	4.277012	83.91722	325.8348	4.277012	4.277012	4.277012	10.17929	0.098842	0.235245 no
Endosulfan	243.0206	618.0939	15561.78	77.76659	327.5898	15561.78	77.76659	101.8742	241.8541	2.354328	5.589282 no
Endrin	95.44082	413.9022	8608.645	30.54106	219.3681	8608.645	30.54106	40.00879	94.9827	0.924609	2.195064 no
Heptachlor	574.4123	41.94208	5.987817	183.8119	22.22931	5.987817	5.987817	5.987817	14.251	0.138379	0.329343 no
Toxaphene	806.3865	2.207478	20.52966	258.0437	1.169963	20.52966	1.169963	1.532652	3.638586	0.03542	0.084088 no
Other Parameters:											
Fecal Col.(col/100ml)	---	---	---	---	---	---	---	---	---	---	--- no
Chlorine	20988.14	121411.3	---	6716.206	64347.99	---	6716.206	8798.229	20887.4	203.3283	482.7107 no
Ammonia	---	---	---	---	---	---	---	---	---	---	--- no
Chlorides	---	---	---	---	---	---	---	---	---	---	--- no
Sulfates	---	---	---	---	---	---	---	---	---	---	--- no
TDS	---	---	---	---	---	---	---	---	---	---	--- no
	---	---	---	---	---	---	---	---	---	---	--- no
	---	---	---	---	---	---	---	---	---	---	--- no

APPENDIX B-3 LA0000329, AI No. 289

Documentation and Explanation of Water Quality Screen
and Associated Lotus Spreadsheet

Each reference column is marked by a set of parentheses enclosing a number and asterisk, for example (*1) or (*19). These columns represent inputs, existing data sets, calculation points, and results for determining Water Quality Based Limits for an effluent of concern. The following represents a summary of information used in calculating the water quality screen:

Receiving Water Characteristics:

Receiving Water: Mississippi River via local drainage
Critical Flow, Qrc (cfs): 141955
Harmonic Mean Flow, Qrh (cfs): 366748
Segment No.: 070301
Receiving Stream Hardness (mg/L): 154
Receiving Stream TSS (mg/L): 53
MZ Stream Factor, Fs: 0.3333
Plume distance, Pf: N/A

Effluent Characteristics:

Company: Honeywell International, Inc.
Facility flow, Qe (MGD): 2.771
Effluent Hardness: N/A
Effluent TSS: N/A
Pipe/canal width, Pw: N/A
Permit Number: LA0000329

Variable Definition:
Qrc, critical flow of receiving stream, cfs
Qrh, harmonic mean flow of the receiving stream, cfs
Pf = Allowable plume distance in feet, specified in LAC 33:IX.1115.D
Pw = Pipe width or canal width in feet
Qe, total facility flow , MGD
Fs, stream factor from LAC.33.IX Chapter 11 (1 for harmonic mean flow)
Cu, ambient concentration, ug/L
Cr, numerical criteria from LAC.33.IX.1113, Table 1
WLA, wasteload allocation
LTA, long term average calculations
WQBL, effluent water quality based limit
ZID, Zone of Initial Dilution in % effluent
MZ, Mixing Zone in % effluent

Formulas used in aquatic life water quality screen (dilution type WLA):

Streams:

$$\text{Dilution Factor} = \frac{Qe}{(Qrc \times 0.6463 \times Fs + Qe)}$$

$$WLA\ a,c,h = \frac{Cr}{\text{Dilution Factor}} - \frac{(Fs \times Qrc \times 0.6463 \times Cu)}{Qe}$$

Static water bodies (in the absence of a site specific dilution):

Discharge from a pipe:

$$\text{Critical Dilution} = \frac{(2.8)\ Pw\ n^{1/2}}{Pf}$$

$$WLA = \frac{(Cr-Cu)\ Pf}{(2.8)\ Pw\ n^{1/2}}$$

Discharge from a canal:

$$\text{Critical Dilution} = \frac{(2.38)(Pw^{1/2})}{(Pf)^{1/2}}$$

$$WLA = \frac{(Cr-Cu)\ Pf^{1/2}}{2.38\ Pw^{1/2}}$$

Formulas used in human health water quality screen, human health non-carcinogens (dilution type WLA):

Streams:

$$\text{Dilution Factor} = \frac{Qe}{(Qrc \times 0.6463 + Qe)}$$

$$WLA\ a,c,h = \frac{Cr}{\text{Dilution Factor}} - \frac{(Qrc \times 0.6463 \times Cu)}{Qe}$$

Formulas used in human health water quality screen, human health carcinogens (dilution type WLA):

$$\text{Dilution Factor} = \frac{Qe}{(Qrh \times 0.6463 + Qe)}$$

$$WLA\ a,c,h = \frac{Cr}{\text{Dilution Factor}} - \frac{(Qrh \times 0.6463 \times Cu)}{Qe}$$

Static water bodies in the absence of a site specific dilution (human health carcinogens and human health non-carcinogens):

Discharge from a pipe:

$$\text{Critical Dilution} = \frac{(2.8)\ Pw\ n^{1/2}}{Pf}$$

$$WLA = \frac{(Cr-Cu)\ Pf^{*}}{(2.8)\ Pw\ n^{1/2}}$$

Discharge from a canal:

$$\text{Critical Dilution} = \frac{(2.38)(Pw^{1/2})}{(Pf)^{1/2}}$$

$$WLA = \frac{(Cr-Cu)\ Pf^{1/2*}}{2.38\ Pw^{1/2}}$$

* Pf is set equal to the mixing zone distance specified in LAC 33:IX.1115 for the static water body type, i.e., lake, estuary, Gulf of Mexico, etc.

If a site specific dilution is used, WLA are calculated by subtracting Cu from Cr and dividing by the site specific dilution for human health and aquatic life criteria.

$$WLA = \frac{(Cr-Cu)}{\text{site specific dilution}}$$

Long Term Average Calculations:
LTAa = WLAa X 0.32
LTAc = WLAc X 0.53
LTAh = WLAh

WQBL Calculations:
Select most limiting LTA to calculate daily max and monthly avg WQBL

If aquatic life LTA is more limiting:
Daily Maximum = Min(LTAa, LTAc) X 3.11
Monthly Average = Min(LTAc, LTAc) X 1.31

If human health LTA is more limiting:
Daily Maximum = LTAh X 2.38
Monthly Average = LTAh

Mass Balance Formulas:

mass (lbs/day): (ug/L) X 1/1000 X (flow, MGD) X 8.34 = lbs/day

$$\text{concentration(ug/L)}: \frac{\text{lbs/day}}{\text{(flow, MGD) X 8.34 X 1/1000}} = \text{ug/L}$$

The following is an explanation of the references in the spreadsheet.

(*1) Parameter being screened.
(*2) Instream concentration for the parameter being screened in ug/L. In the absence of accurate supporting data, the instream concentration is assumed to be zero (0).
(*3) Monthly average effluent or technology value in concentration units of ug/L or mass units of lbs/day. Units determined on a case-by-case basis as appropriate to the particular situation.
(*4) Daily maximum technology value in concentration units of ug/L or mass units of lbs/day. Units determined on a case-by-case basis as appropriate to the particular situation.
(*5) Minimum analytical Quantification Levels (MQLs). Established in a letter dated January 27, 1994 from Wren Stenger of EPA Region 6 to Kilren Vidrine of LDEQ and from the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". The applicant must test for the parameter at a level at least as sensitive as the specified MQL. If this is not done, the MQL becomes the application value for screening purposes if the pollutant is suspected to be present

on-site and/or in the waste stream. Units are in ug/l or lbs/day depending on the units of the effluent data.

(*6) States whether effluent data is based on 95th percentile estimation. A "1" indicates that a 95th percentile approximation is being used, a "0" indicates that no 95th percentile approximation is being used.

(*7) 95th percentile approximation multiplier (2.13). The constant, 2.13, was established in memorandum of understanding dated October 8, 1991 from Jack Ferguson of Region 6 to Jesse Chang of LDEQ and included in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". This value is screened against effluent Water Quality Based Limits established in columns (*18) - (*21). Units are in ug/l or lbs/day depending on the units of the measured effluent data.

(*8) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, freshwater (FW) or marine water (MW) (whichever is applicable) aquatic life protection, acute criteria. Units are specified. Some metals are hardness dependent. The hardness of the receiving stream shall generally be used, however a flow weighted hardness may be determined in site-specific situations. Dissolved metals are converted to Total metals using partition coefficients in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Similar to hardness, the TSS of the receiving stream shall generally be used, however, a flow weighted TSS may be determined in site-specific situations.

Hardness Dependent Criteria:

Metal	Formula
Cadmium	$e^{(1.1280[\ln(\text{hardness})] - 1.6774)}$
Chromium III	$e^{(0.8190[\ln(\text{hardness})] + 3.6880)}$
Copper	$e^{(0.9422[\ln(\text{hardness})] - 1.3884)}$
Lead	$e^{(1.2730[\ln(\text{hardness})] - 1.4600)}$
Nickel	$e^{(0.8460[\ln(\text{hardness})] + 3.3612)}$
Zinc	$e^{(0.8473[\ln(\text{hardness})] + 0.8604)}$

Dissolved to Total Metal Multipliers for Freshwater Streams (TSS dependent):

Metal	Multiplier
Arsenic	$1 + 0.48 \times TSS^{-0.73} \times TSS$
Cadmium	$1 + 4.00 \times TSS^{-1.13} \times TSS$
Chromium III	$1 + 3.36 \times TSS^{-0.93} \times TSS$
Copper	$1 + 1.04 \times TSS^{-0.74} \times TSS$
Lead	$1 + 2.80 \times TSS^{-0.80} \times TSS$
Mercury	$1 + 2.90 \times TSS^{-1.14} \times TSS$
Nickel	$1 + 0.49 \times TSS^{-0.57} \times TSS$
Zinc	$1 + 1.25 \times TSS^{-0.70} \times TSS$

Dissolved to Total Metal Multipliers for Marine Environments (TSS dependent):

Metal	Multiplier

Copper	$1 + (10^{4.86} \times TSS^{-0.72} \times TSS) \times 10^{-6}$
Lead	$1 + (10^{6.06} \times TSS^{-0.85} \times TSS) \times 10^{-6}$
Zinc	$1 + (10^{5.36} \times TSS^{-0.52} \times TSS) \times 10^{-6}$

If a metal does not have multiplier listed above, then the dissolved to total metal multiplier shall be 1.

(*9) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, freshwater (FW) or marine water (MW) (whichever is applicable) aquatic life protection, chronic criteria. Units are specified. Some metals are hardness dependent. The hardness of the receiving stream shall generally be used, however a flow weighted hardness may be determined in site-specific situations. Dissolved metals are converted to Total metals using partition coefficients in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Similar to hardness, the TSS of the receiving stream shall generally be used, however, a flow weighted TSS may be determined in site-specific situations.
Hardness dependent criteria:

Metal	Formula
Cadmium	$e^{(0.7852[\ln(\text{hardness})] - 3.4900)}$
Chromium III	$e^{(0.8473[\ln(\text{hardness})] + 0.7614)}$
Copper	$e^{(0.8545[\ln(\text{hardness})] - 1.3860)}$
Lead	$e^{(1.2730[\ln(\text{hardness})] - 4.7050)}$
Nickel	$e^{(0.8460[\ln(\text{hardness})] + 1.1645)}$
Zinc	$e^{(0.8473[\ln(\text{hardness})] + 0.7614)}$

Dissolved to total metal multiplier formulas are the same as (*8), acute numerical criteria for aquatic life protection.

(*10) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, human health protection, drinking water supply (HHDW), non-drinking water supply criteria (HHNDW), or human health non-primarry contact recreation (HHNPCR) (whichever is applicable). A DEQ and EPA approved Use Attainability Analysis is required before HHNPCR is used, e.g., Monte Sano Bayou. Units are specified.

(*11) C if screened and carcinogenic. If a parameter is being screened and is carcinogenic a "C" will appear in this column.

(*12) Wasteload Allocation for acute aquatic criteria (WLAa). Dilution type WLAa is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the acute aquatic numerical criteria for that parameter. Units are in ug/L.
Dilution WLAa formulas for streams:

$$WLAa = (Cr/\text{Dilution Factor}) - \frac{(Fs \times Qrc \times 0.6463 \times Cu)}{Qe}$$

Dilution WLAa formulas for static water bodies:
WLAa = (Cr-Cu)/Dilution Factor)
Cr represents aquatic acute numerical criteria from column (*8).
If Cu data is unavailable or inadequate, assume Cu=0.

If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*13) Wasteload Allocation for chronic aquatic criteria (WLAc). Dilution type WLAc is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the chronic aquatic numerical criteria for that parameter. Units are in ug/L.
Dilution WLAc formula:

$$WLAc = (Cr/\text{Dilution Factor}) - \frac{(Fs \times Qrc \times 0.6463 \times Cu)}{Qe}$$

Dilution WLAc formulas for static water bodies:
WLAc = (Cr-Cu)/Dilution Factor)
Cr represents aquatic chronic numerical criteria from column (*9).
If Cu data is unavailable or inadequate, assume Cu=0.
If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*14) Wasteload Allocation for human health criteria (WLAh). Dilution type WLAh is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the human health numerical criteria for that parameter. Units are in ug/L. Dilution WLAh formula:

$$WLAh = (Cr/\text{Dilution Factor}) - \frac{(Fs \times Qrc,Qrh \times 0.6463 \times Cu)}{Qe}$$

Dilution WLAh formulas for static water bodies:
WLAh = (Cr-Cu)/Dilution Factor)
Cr represents human health numerical criteria from column (*10).
If Cu data is unavailable or inadequate, assume Cu=0.
If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*15) Long Term Average for aquatic numerical criteria (LTAa). WLAa numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 0.32. WLAa X 0.32 = LTAa.
If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*16) Long Term Average for chronic numerical criteria (LTAc). WLAc numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 0.53. WLAc X 0.53 = LTAc.
If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*17) Long Term Average for human health numerical criteria (LTAh). WLAh numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 1. WLAc X 1 = LTAh.
If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then a blank shall appear in this column.

(*18) Limiting Acute, Chronic or Human Health LTA's. The most limiting LTA is placed in this column. Units are consistent with the WLA calculation.

If standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then the type of limit, Aquatic or Human Health (HH), is indicated.

(*19) End of pipe Water Quality Based Limit (WQBL) monthly average in terms of concentration, ug/L. If aquatic life criteria was the most limiting LTA then the limiting LTA is multiplied by 1.31 to determine the average WQBL ($LTA_{limiting\ aquatic}$ X 1.31 = $WQBL_{monthly\ average}$). If human health criteria was the most limiting criteria then LTAh = $WQBL_{monthly\ average}$. If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then either the human health criteria or the chronic aquatic life criteria shall appear in this column depending on which is more limiting.

(*20) End of pipe Water Quality Based Limit (WQBL) daily maximum in terms of concentration, ug/L. If aquatic life criteria was the most limiting LTA then the limiting LTA is multiplied by 3.11 to determine the daily maximum WQBL ($LTA_{limiting\ aquatic}$ X 3.11 = $WQBL_{daily\ max}$). If human health criteria was the most limiting criteria then LTAh is multiplied by 2.38 to determine the daily maximum WQBL ($LTA_{limiting\ aquatic}$ X 2.38 = $WQBL_{daily\ max}$). If water quality standards are being applied at end-of-pipe, such as in the case of certain TMDLs, then either the human health criteria or the acute aquatic life criteria shall appear in this column depending on which is more limiting.

(*21) End of pipe Water Quality Based Limit (WQBL) monthly average in terms of mass, lbs/day. The mass limit is determined by using the mass balance equations above. Monthly average WQBL, ug/l/1000 X facility flow, MGD X 8.34 = monthly average WQBL, lbs/day.

(*22) End of pipe Water Quality Based Limit (WQBL) monthly average in terms of mass, lbs/day. Mass limit is determined by using the mass balance equations above. Daily maximum WQBL, ug/l/1000 X facility flow, MGD X 8.34 = daily maximum WQBL, lbs/day.

(*23) Indicates whether the screened effluent value(s) need water quality based limits for the parameter of concern. A "yes" indicates that a water quality based limit is needed in the permit; a "no" indicates the reverse.

Appendix C

MEMORANDUM

TO: Christy Clark

FROM: Todd Franklin

DATE: September 25, 2009

RE: Stream Flow and Water Quality Characteristics for the Mississippi River and Capitol Lake, receiving waters for Honeywell International, Inc. / Honeywell Baton Rouge Plant (Permit No. LA0000329, AI: 289)

The discharges from Outfalls 001, 003, and 005 flow into the Mississippi River. Ambient data for hardness and TSS was taken from ambient monitoring station #0318 (Mississippi River at the Louisiana ferry landing near St. Francisville, midstream). The following results were obtained:

Average hardness = 154 mg/l
15^{th} percentile TSS = 53 mg/l

The following was based on historical flow data obtain from the USGS regarding the Mississippi River:

7Q10 = 141,955 cfs
Harmonic Mean Flow = 366,748 cfs

The discharge from Outfall 004 flows into the East Baton Rouge Parish municipal sewer treatment system; thence into Capitol Lake. Ambient data for hardness and TSS was taken from ambient monitoring station #0583 (Capitol Lake in Baton Rouge at the south end of the lake). The following results were obtained:

Average hardness = 91 mg/l
15^{th} percentile TSS = 11 mg/l

For the purposes of permit limit calculations, the default 7Q10 and harmonic mean flow values of 0.1 cfs and 1.0 cfs, respectively, should be utilized.

If you have additional questions or comments, please contact me at 2-3138.

Appendix D

BIOMONITORING FREQUENCY RECOMMENDATION AND RATIONALE FOR ADDITIONAL REQUIREMENTS

Permit Number: **LA0000329**
Facility Name: **Honeywell International, Inc./Baton Rouge Plant**
Previous Critical Biomonitoring Dilution: **0.0924% (10:1 ACR)**
Proposed Critical Biomonitoring Dilution: **0.09% (10:1 ACR)**
Date of Review: **10/01/09; revised 02/22/10**
Name of Reviewer: **Laura Thompson**

Recommended Frequency by Species:

***Pimephales promelas* (Fathead minnow):** **Once/Year[1]**
***Daphnia pulex* (water flea):** **Once/Year[1]**

Recommended Dilution Series: **0.04%, 0.05%, 0.07%, 0.09%, and 0.1%**

Number of Tests Performed during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow):** **5**
***Daphnia pulex* (water flea):** **5**
***Ceriodaphnia dubia* (water flea):** **N/A – Testing of species was not required**

Number of Failed Tests during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow):** **No failures on file during the past 5 years**
***Daphnia pulex* (water flea):** **No failures on file during the past 5 years**
***Ceriodaphnia dubia* (water flea):** **N/A – Testing of species was not required**

Failed Test Dates during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow):** **No failures on file during the past 5 years**
***Daphnia pulex* (water flea):** **No failures on file during the past 5 years**
***Ceriodaphnia dubia* (water flea):** **N/A – Testing of species was not required**

Previous TRE Activities: **N/A – No previous TRE Activities**

[1] An acute biomonitoring critical dilution of less than 1% shall have an established biomonitoring frequency of once per year.

Additional Requirements (including WET Limits) Rationale / Comments Concerning Permitting:

Honeywell International, Inc./Baton Rouge Plant owns and operates an organic chemical manufacture in Baton Rouge, East Baton Rouge Parish, Louisiana. LPDES Permit LA0000329, effective March 1, 2004, contained freshwater acute biomonitoring as an effluent characteristic of Outfall 001 and Outfall 003 for *Daphnia pulex* and *Pimephales promelas*. The effluent series consisted of 0.0390%, 0.0520%, 0.0693%, 0.0924%, and 0.123% concentrations, with the critical biomonitoring dilution being defined as the 0.0924% effluent concentration. The testing was to be performed once per year for the *Daphnia pulex* and the *Pimephales promelas*. Data on file indicate that the permittee has complied with the biomonitoring requirements contained in LA0000329 with no toxicity failures during the last five years.

It is recommended that freshwater acute biomonitoring continue to be an effluent characteristic of Outfall 001 (batch discharge of 1.05 mgd) and Outfall 003 (continuous discharge of 1.721 mgd) in LA0000329. The effluent dilution series shall be 0.04%, 0.05%, 0.07%, 0.09%, and 0.1% concentrations, with 0.09% being defined as the critical biomonitoring dilution (the 10:1 Acute-to-Chronic ratio has been implemented). Toxicity tests shall be performed on the flow-weighted composite samples of Outfalls 001 and 003. Since the proposed critical biomonitoring dilution is less than 1% (10:1 ACR), the biomonitoring frequency shall be once per year for *Daphnia pulex* and *Pimephales promelas*.

This recommendation is in accordance with the LDEQ/OES Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan Volume 3. Version 6, and the Best Professional Judgment (BPJ) of the reviewer.